# The Builder.

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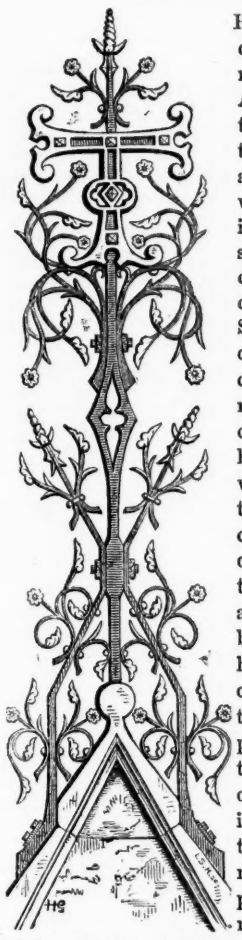
## *Lancashire and Spitalfields.*



HE condition of the Lancashire work-people is most unsatisfactory. The American struggle seems to be no nearer to a close than it was a year ago; and if even this terrible war were at once ended, it is not likely that we should have any immediate sufficient supply of cotton from the Southern States. In the twenty-one Unions in which the chief part of the cotton-manufacture has been carried forward there has been, in the fourteen weeks commencing with the second week of December last, a decrease of pauperism which, by the middle of last month, amounted to 59,720; but unfortunately there has been an increase of pauperism since that time; and it is important to remember that in the third week of March there were in those Union districts 220,050 persons receiving relief from the parish funds; while this multitude is but a part of the number of persons who are here destitute, and depending on the assistance of others for their daily food.

The sums which have been collected will, unless renewed exertions are made, be expended before many weeks have passed, and there will then be no other sufficient resource for this vast number of unemployed people than the poor-rates. Already many parishes are ill able to provide the money which is now needed, and the requirement will be largely increased in amount when the other resources are no longer available. The present position of affairs, in a monetary point of view, requires very careful consideration, not only by the Boards of Guardians of the Unions, but also by the Government and Parliament: the co-operation of all will be required to meet the trouble which is yet to come. Great, however, as is the difficulty in a pecuniary point of view, the forced and continued idleness, as we early said, of so many men and women, youths and girls, is a matter of even more serious import; for it is impossible, let the nature of the people be as good as it may, that this can be continued for any length of time without causing discontent and damage to that independent spirit which has heretofore distinguished the workman. Employment which will keep the minds and fingers busy is almost as necessary to mankind as food; but the puzzling question is, how is profitable work, under the present circumstances, to be obtained?

Emigration on an extensive scale has been suggested by many; and there is no doubt that a large number of the most intelligent of the Lancashire cotton hands would gladly take an opportunity of leaving the present distress, and trying to better their fortunes in distant lands, if it were afforded; but, in the hope of times improving, there is a numerous and influential class connected with the cotton manufacture who are strongly opposed to such plans, which they say would be the means of causing the loss of valuable workers in this branch of our national industry.

Touching emigration, there are several matters to be considered, such as the fitness of those who, for the greater part of their lives, have been accustomed to sedentary employment, for the description of out-door work which is needed in young and rising colonies. Strong, healthy young women, who have some turn for domestic management, would be gladly received in many homes far away over the sea; and the young members of Lancashire families would soon accommodate themselves to the altered conditions, and flourish in the new lands. But we have misgivings about the older hands, both male and female. Still the risk of partial failure in this respect would be but a small drawback from the amount of good that might be expected.

In connexion with emigration, we may mention that notice of motion has been given to the Canadian Assembly, to the effect "That an humble address be presented to the Governor General, praying that he may be graciously pleased to cause to be set apart not less than 500,000 acres of the public lands of this province, fit for settlement, and placed at the disposal of the Imperial Government, for the first settlement thereon of the distressed operatives of the mother-country; and that this House pledges itself to give effect to any legislation that may be required for the purpose of carrying out this resolution."

There is a hope for better days in future for Lancashire; but there is another district for more than two centuries past distinguished as the seat of an important branch of British industry, for which there seems no chance of future improvement,—we mean the silk district of Spitalfields and Bethnal-green, where there exists at the present time a far greater amount of real distress and actual starvation than (thanks to the relief funds) is to be found in the cotton districts. On this point we are convinced by a considerable amount of careful observation. In Spitalfields the distress which exists is intense, and every one, except a part of the silk-weavers themselves, sees that this must get worse instead of better. Years since attention was directed in the *Builder* to this numerous and worthy body of metropolitan workers; we showed how impossible it was that the hand-loom could continue to compete with profit to the weavers with steam machinery; and from time to time since then have felt it a painful duty to note the sure working of a certain social law. In order to compete with more rapid means of production, and with the cheaply wrought but tastefully-designed and well-coloured silks of foreign countries, the hand-loom weavers of East London called in the assistance of their sons and daughters, so that by their united exertions they might produce a weekly sum, barely equal to that which could formerly be earned by a single man or woman alone; and with extraordinary rapidity the Spitalfields weavers have fallen into such a state of distress that the most earnest exertions of a whole family are no longer (in the majority of instances) sufficient to provide the most common necessaries of life. The terrible condition of hundreds of these families can only be rightly conceived by those who have been called to move amongst them.

We look at the state of things which exists here with pity and alarm, for experience of the poorer classes of the metropolis assures us that without a helping hand there must in this district be a large addition made to the pauperism, vice, and crime of London. What is to become of all the young men and women, and boys and girls, who are here left without any present or future chance of working for their bread by that labour to which they have been accustomed? And so crowded are the paths of the various kinds of industry which do not depend particularly on skilled labour, that it is not easy to find an open one.

Already there are considerably more than one thousand inmates in the workhouse of Bethnal-green, and numerous weavers have applied for out-door assistance; for although some of them are in a complete state of starvation and destitution, they have the strongest objection to go with their families into the workhouse. To a certain extent, but only for a limited time, this aid has been allowed in very extreme cases. Some will blame the parish authorities for holding out inducements for perpetual pauperism rather than affording a little present relief but in this and the adjoining parishes the poor-rate is very heavy. Indeed, it would have been far more so if the past winter had been a hard one: as it is, many of those who pay the rates are almost in a state to claim relief themselves. It is, therefore, scarcely possible, under the circumstances, to treat the poor with that kind policy which in many cases would be of future advantage. Thoughts of this, and of what has met the eye in East London, show the necessity for an equalization of the poor-rates throughout all the parishes of the metropolitan districts. But the more particular question now is, what can be done to drag the families of the silk weavers from the pit into which they have fallen? And here, as in Lancashire, emigration suggests itself as a means of meeting the evil to a considerable extent. On a limited scale, and in a great measure by the bounty of a lady who is well known in this neighbourhood for her thoughtful kindness, this has been already successfully tried; and further pecuniary means are only needed to remove those starving people from all the chances of vice and degradation, ill-health or early death, which await them in their present situation. We have faith that, in this land, when the necessity is clearly understood, the generous minds of the possessors of wealth will not leave the means for carrying out such a purpose as we have hinted at unprovided.

There is one great advantage in emigration,—that it removes those who have been for long accustomed to particular pursuits, and from which they are unwilling to turn, even in adverse circumstances, to fresh scenes in which perforce they must direct the energies of both mind and body into fresh channels. The claims of the Lancashire people upon our care must not be overlooked by either the Government or by the public, but at the same time the sad state of the Spitalfields weavers should not be left without consideration; and if funds be raised to assist either of those classes to emigrate, economy in the use of the money will cause a greater amount of good. It might, therefore, be worth while to learn if the Government, without making a grant from the national exchequer, could be of much assistance by using some of the vessels provided for warlike purposes for a time for emigration purposes. We have great fleets upon the sea—huge and brave ships in harbours and dockyards—would it not be easy in a time of peace to spare a few of them to carry the distressed families from Lancashire and Spitalfields, where their labour is not just now in demand, to spots where it is in great request? While we were writing, inquests were held on the bodies of a poor man and poorer woman who died from destitution and fever in Bethnal-green; and evidence was given before Mr. John Humphreys, the coroner, of the awful state of things which exists in this district. The parochial medical officer said as to the house in which the family of the woman lived, twelve in number, it was his belief that if they were not removed at once, the whole of them would die from typhoid fever and starvation!!!

## DISCOVERIES IN ROME.

The Church of S. Nicolo in Carcere has been closed for repairs during about seventeen years; but we are assured that the slow advancing works are, at last, near to completion, and that this ancient building amidst the quaint irregular streets near the Tiber, where once stood the Forum Olitorium (or vegetable market), beyond the line of the Servian walls, will be re-opened, restored in a style of splendour, but preserving

its leading features of basilica architecture, within six months hence. All are familiar with the story of the "Roman Daughter," and the prison consecrated into a temple of piety to commemorate the act by which she saved a parent's life,—one example of the reverence entertained for domestic virtue amidst whatever corruption of manners in ancient Rome. But archæologists have destroyed the claims once admitted for a spot supposed to be that story's theatre, the subterranean cell below a temple of the Republican period, included within the St. Nicholas church. That in this celebrated incident the relationship of the personages was different from that generally assumed, and often represented by art, a *mother*, not a *father* and daughter, being the real actors in the scene in which the life of one was saved by nourishment from the other's breast, must be admitted on the credit of the only reliable classic authorities by whom it is mentioned: Pliny, "Hist. Nat.," vii. 36, and Valerius Maximus, l. v. c. 4. For the version which presents the subject, more pictorially indeed, as a *father's* life thus saved by a daughter, we have only the less trustworthy report of Solinus, "Polyhist.," and Festus, in "Pietate;" whilst Pliny states distinctly that the temple dedicated to Piety on that prison site (a *sacellum*, or chapel according to Solinus) was, among several edifices, swept away to make room for the theatre begun by Julius Cæsar and finished by Augustus, with dedication to Marcellus. The *other* Temple of Piety being in the immediate vicinity, we may understand how the two became confounded, and one at least positively mistaken for the other by ecclesiastic authorities, amidst the ignorance of Mediæval Rome in regard to all concerning her own antiquities. Till the fifth century of our era, it is supposed, this temple still remained entire; and in the ninth century was raised above its then ruined structure the church known as "St. Nicholas in the Prison," a name expressing the popular tradition,—source, no doubt, of a special privilege possessed by it from the time, it is said, of St. Damasus (who held this cure before becoming pope), namely, that all the prisons in Rome were subject to the jurisdiction of its clergy as pastors of their parochial centre. A benefactor and restorer of this parish church was the Cardinal Borgia, who became Pope Alexander VI.; and in 1599 was built the façade still standing, on an obscure piazza, from the design of Giacomo della Porta. Certain it is, that on this site stood the Temple of Piety, built, or at least founded, A.U.C. 573, in fulfilment of the vow made ten years previously by Acilius Glabro, on occasion of his victory over Antiochus, the Syrian king, at Thermopylæ; but *dedicated* by that conqueror's son, who placed before its front a gilt equestrian statue of his father, mentioned by Livy (l. xl., c. 34), as the first "*statua aurata*" seen in Rome. Earlier, about the end of the fifth century, a temple to Hope, near the same spot, had been dedicated by Attilius Collatinus, who triumphed over the Carthaginians in the year 497, and had twice been consul. This, first restored after a fire in 640, was rebuilt under Augustus, to be dedicated anew, after his death, by Germanicus; and in its extant ruins Canina points out ornamental features, added on to the Ionic of the primitive building, in style evidently of the Early Imperial period (see *Esposizione Topog. di Roma Antica*). The third of the adjacent temples, here forming one group, was dedicated to Juno Sospita by the Censor Cornelius Cethegus, four years after he had vowed its erection, previously to engaging in battle with the Cizalpine Gauls and Insubrians, in the year of Rome 559. Of this last we have no further record, save in the catalogues of the Regionaries, Victor and Rufus, showing that it still existed, probably entire, about the end of the fourth century of our era.

The first excavations with the object of discovering these ruins under the church by which all these temples had been absorbed, buried beneath modern buildings, were, in 1808, directed by the architect Valadier; and the results led to establishing beyond all doubt the fact that the three fanes had stood parallel from east to west, the central being that to Piety, and of largest dimensions, approached from the Forum Olitorium by fifteen steps, its entire area measuring 105 feet by 50 feet. Surrounded by a Doric peristyle of fluted columns in peperino, with six in double file along the front and back, eleven in single file along each side, it was therefore a hexastyle-pseudodipteros. A portion of the pedestal for the equestrian figure of Acilius Glabro was dug up near its front, so placed that it appeared to have divided the first ten steps of the outer staircase into two branches; and along the remains of a projecting basement or socle, adorning the façade, were found several quadrate niches between pilasters, destined, as Nibby infers, for the bronze tablets of Fasti, here displayed to public view on the Forum. Opposite is supposed to have stood the Columna Lactaria, a pillar at which it was the inhuman practice of Paganism to leave infants exposed for the chance of being taken to nurse by some compassionate stranger. The church of St. Nicholas has arcades and columns, dividing nave and aisles under a flat coppered ceiling, the Corinthian capitals and marble shafts being unequal, and from their irregularity manifestly the spoils of some classic and splendid edifice. We descend into the *confessional*, an elliptic chamber recently constructed below the high altar, and thence pass through a spacious modern vault, under the sanctuary, into a long dark corridor, vaulted in modern brickwork, along each side of which runs a substructure in enormous square blocks of travertine, interrupted at irregular intervals by small quadrate cells, whose walls are of peperino, alike massive; all of the same dimensions; scarcely in any part ruinous, but without inclosure or any remnant of walls in front; and this absence both of masonry and doorways to guard the entrances, certainly does not consist with the theory of *imprisonment* being the destined purpose of these interiors. The old custode, whose one idea on the subject is continually dinged into our ears with repetition of the word, "*carcere, carcere,*" improves, indeed, on the favourite version of the "Roman Daughter" story, by converting the *mother* not merely into a *father*, but a senator of Imperial Rome, who was undoubtedly confined here!

The above described travertine structure is surmounted at regular intervals by the basements and shafts of a peperino colonnade, here seen in very imperfect glimpses, the upper part of all the pillars being built up in the church walls above. Hence we pass into two other parallel corridors, each lined, but only along one side, with similar cells constructed in peperino, opening from a projecting front of travertine. At one end of the corridor running southwards we reach a flight of steps, antique, leading to a doorway, and this egress opens on a narrow winding passage now blocked up, at a short distance, by fallen masonry. The walls, each side of this doorway, are reduced to mere rubble-work, without any incrustation of hewn stone; and the custode sagaciously assures us that this mysterious passage leads as far as the basilica of St. Sebastian on the Appian Way, at least three miles distant! A large chamber, in masonry, similar to that of the cells, opens at the end of one corridor; and another, still larger, is now only visible through a gap in the modern walls, completely shut in by the restored vaults under the church's tribune. The shaft and Doric capital of one of the columns, imperfectly seen below, is recognized, half embedded in a niche, after we have returned to the aisle of the church; and opposite, in the southern line of walls, are partly visible some other peperino columns, of which seven may be fully seen from a narrow court external to the building on this side. In another court off the northern side are several fragments of architectural ornament, some in marble, now set into a wall for better display, their rich character in a few instances contrasted with the simplicity distinguishing all else in these ruins. More interesting is what we see after ascending to a platform immediately under the old belfry, where we stand between two files of walls and cornices,—to the north the Temple of Hope, to the south that of Piety, alike built in peperino, one loftier than the other, with cornice better preserved, the details of the egg-moulding still clear, though not unworn by time, with a frieze below, along which are numerous indentures, evidently the holes for nails by which were fastened letters of a vanished inscription. The opposite lower cornice is less perfect and less strongly marked in its relief details. Still higher, ascending to another terrace, we see several courses of the masonry belonging to the Temple of Piety; and these terminate in a broken arch of very massive structure, the complete span of which must have been considerable. Among antiques appropriated to sacred use in the church is a sarcophagus of the finest green porphyry, with two expressive Medusa heads in low relief on each front, this being destined for the relics under the high altar, to be surmounted by a canopy resting on four columns of Oriental alabaster.

The excavations on the height immediately above the Antonine Thermæ are continuing, as has been the case during the last six years; but now, apparently, rather in the object of giving employment to the youths of the reformatory for juvenile culprits located at this old convent than with any expectation of great results. Several brick constructions, in the style of the later imperial period, and a series of parallel arched chambers with entrances walled up, under one wing of the inhabited buildings, attest the foundation of some extensive edifice on this elevated ground. For some time archæologists were at a loss to divine further, still less determine, when the discovery, in '59, of a few words on a water-pipe, proved sufficient to identify beyond doubt:

ABI CHILONIS PRAEF VRB,

explaining the destination of this site for the palace of Fabius Chilo, the Domus Cilonis of the Regionaries, its master having been prefect of Rome, consul in the years 193 and 204, and at one time preceptor of Antoninus Caracalla, who was on the point of sacrificing him, together with the countless other victims put to death after the murder of Geta, as suspected friends of that higher victim. Some of the brickwork ruins have been swept away since the discovery here; and we were sorry to observe the dilapidation of a more important structure in their vicinity, described and engraved in Sir Wm. Gell's "Topography of Rome;"—a remnant of the Servian fortifications against the declivity on which this convent stands now built into the inclosure wall on the side overlooking the valley between this and the Palatine Hill. Only two courses, in large squared blocks of volcanic Alban stone, are left—considerably less than appears in Gell's pages.

Some time ago a proprietor of enterprise in such undertakings, Signor Guidi, began other excavations not far from this spot, immediately below the southern end of the Antonine Thermæ, outside the great inclosed area of those ruins, though within the quadrangle of porticoes and chambers once surrounding them,—now, indeed, almost entirely lost save on one side. Two stories of subterranean halls, apparently independent of the Baths, and belonging to some splendid residence, were here uncovered (for the most part within the last few weeks), both having pavements in black and white mosaic, of gracefully-designed floral and folial subjects, but without figures or other representations. The walls are covered with colour, mostly deep red, divided by quadrate borders of different tints; and within these compartments are figures, some well preserved, others scarce traceable. Most of the mosaic pavement has fallen in from the upper story, encumbering the floor below, to which we can only descend by a ladder, no staircase remaining. But the principal extent of halls is still subterranean, there being in this part but one story under the ground cultivated as a garden immediately above. Here the wall paintings are more perfect, and cover almost the entire surface; but as they became inaccessible, owing to the influx of water from an inundation of the Tiber, shortly after their recent discovery, and the works have been in consequence suspended, we are unable to supply fuller report as to these interiors in their present state.

The activity within the sphere of sacred archæologic pursuits and research for their illustration under the present pontificate has demanded a special record of results; and this desideratum is promised satisfaction, with all possible advantages of intelligent interpretation, by a monthly issue from the pen of Di Rossi, first among living authorities on Christian antiquity in Rome. His "*Bulletino di Archeologia Cristiana*" began its welcome career last January, in pamphlet form of ample contents, with facsimile epigraphs and outline engravings occasionally interspersed over the text, and has hitherto proved indeed worthy of its distinguished editor. The first number gives a full account of the discoveries under his direction in the Catacombs on the Appian Way, begun in 1848, and resulting, two years later, in the opening of a crypt, at the foot of its ancient staircase, adorned by paintings, among the most important yet found in these Christian hypogees; also, the opening, in 1857, of another crypt belonging to the catacombs of Pratextatus, whose vaulted roof is covered with paintings of much beauty, ascribable, as here shown, to the period of the Antonine Emperors. The second number reports with full details on the subterranean church of S. Clemente, and its interesting archaic contents, some of its paintings being ascribed by Di Rossi to the ninth, others to the tenth and the latter years of the eleventh century. Elsewhere are described the frescoes lately found in the most ancient section of the S. Lorenzo basilica: the Virgin and Child, and the figures of five male and five female saints in this grouping, are allowed claims to antiquity at least as high as the tenth century. Besides this new periodical we have the Bulletin of the

Archæological Institute, conducted by the Germans, to whom that association pertains; also monthly, and very well compiled, but rather appropriated to classic than sacred antiquity; nor is there any other regular report of archæological researches in Rome save at the sessions of *Accademie*—amidst which deficiencies we have the greater reason to hail with pleasure the undertaking of Di Rossi.

The site of the ancient Aricia, but the highest point of which is occupied by the modern village of that name, is now being excavated by Signor Fortunati, to whose exploring energies we owe the discovery of the beautifully-painted tombs and the St. Stephen basilica, on the Latin Way. A private society for excavating purposes has lately found the remains of an antique villa on the Campagna, near a village named Prima Porta, on the Tiber; and close to the little port on that river, within the city, was recently disinterred a pedestal bearing the dedication, *Divo Antonino*.

Casts from all the reliefs referring to Trajan, on the Arch of Constantine, have been executed for the Emperor of France; and, thus reproduced, these noble sculptures may be far better appreciated.

## THE ARCHITECTURAL EXHIBITION.

CONTINUING our notice, we come to a work by Mr. E. C. Robins, a "Design for the Ornamentation of Lambeth Bridge" (191). Two octagonal turrets on each pier, Gothic and "Perpendicular" in character, with pyramidal cappings, balconies, and panelling, and an ornamental railing, constitute the design, which, though calculated to improve the appearance of the bridge, has too much of the character of masonry, for work which would probably be executed in iron. Amongst several works by Mr. I'Anson, that have added something of value to the architecture of the City, we find illustrated in the Exhibition, the building No. 83, Lombard-street (272), that adjoins his Colonial Assurance Office, which latter is illustrated in the same drawing (276) with the Colonial Chambers, Fenchurch-street; the Royal Exchange Buildings, Cornhill; and the Argus Life Office, Pall-mall. The newer building in Lombard-street is a narrow and lofty pile, harmonizing in general character, and in the main lines, with the work next to it, yet plainly a different building. The lower story, which is a shop, presents a simple elliptical arch of polished red granite, and piers; the principal stories above, have the piers between the windows and at the angles finished with capitals; a peculiar balcony projects from a window in one story; and forming the top story, is an open loggia. Above the cornice is a dormer window, decoratively treated, and a Mansard roof. This work is very suggestive in a town like London, where narrow fronts are the rule, and horizontal cornices as terminations are usually ill-managed. The Colonial Chambers design is suggestive of architecture that may be made consistent with use of large surfaces of glass; whilst the Corn Exchange Chambers, Seething-lane (138), are remarkable in London for the attention paid to grouping of the windows, and the manner in which with the help of shields on the central piers, an appearance of symmetry is given, notwithstanding that the entrance doorway is out of the centre. Amongst the other drawings of London buildings which we have not been able to mention, are those of Mr. Morgan's barracks now nearly completed at Chelsea, near the Suspension Bridge, for the Guards (209, 210). The frame containing a plan is so badly hung, that we are not able to make out many of its features; so, we cannot tell whether the solutions of several problems discussed in our pages on the occasion of the original competition, have been made by a civil architect. We see however that each barrack-room is lighted by windows on opposite sides, causing the great length of the main building; but there are many blocks detached on the further side of the parade, and not seen from the road. The front range of building has well-arranged masses, but there is less taste in the management of the details of coloured materials; and the flanking turrets of the centre of the front are terminated very abruptly; and the whole front suffers in consequence. The "New Building in Paternoster-row, for Messrs. Longman," is shown in a drawing (286) by Messrs. J. Griffith & H. Dawson. Certain details, such as the chamfering to the architraves, we would rather have had different; but the work generally, deserved to be seen under better circumstances of site, than those of "the Row." Mr. Owen Jones contributes elevations of three of his buildings, including St. James's Hall, the Piccadilly front (323), the "Garden Front, No. 3, Kensington Palace Gardens" (333), and "Messrs. Osler's House, Oxford-street" (336), and eight of his original drawings for the Victoria Psalter (357 and 365). Mr. C. J. Richardson exhibits a view of "Queen's Gate Lodge, Hyde Park" (326). The portico has columns at the angles, coupled: one column of each pair is rusticated with blocks, whilst the other has the shaft plain. The effect is not good: a square pier for the angle, or one broad on the face, or an end of the wall with an *anta*, would any one of them have been better. The interior of a "New Music Hall to be erected in London," from the designs of Mr. H. H. Collins, is shown in No. 329. It will be remarkable as having two tiers of galleries, the upper tier apparently being formed into private boxes. Mr. J. W. Papworth's "Alternative Sketches for a School with Teacher's Dwellings" (111), Gothic, are less pleasing in appearance than his "Preliminary Sketch for a Pair of Houses at Kensington" (113), and his "Additions and Alterations at Streatham" (126); though the window-heads in one of these, might have been advantageously left without chamfering, and the finials could not stand as they are shown. The cornice (with *chenau*), and the dormer-window, are however managed in a manner to make the whole design productive of considerable effect.

Mr. Lamb's works (Nos. 155, 159, 160, 164, 165, 169, 170), whereof we have already referred to a design shown in one small sketch, include drawings of churches, schools, mansions, cottages, stables, and other buildings, besides studies. Most of the works are remarkable for a considerable amount of design, both in details and grouping. In some of the number however, as in the "New Wing, Nun Appleton, near Tadcaster," *repose* is lacking, and from the very quantity of detail in brickwork, that has been introduced. His "Aldwork Manor House," near York, in the same material, is more pleasing. The Ball-room at Montreal, Seven Oaks, is characterized by an arrangement of four segmental-arched trussed ribs, supporting the ceiling, and dividing it into nine equal compartments,—the room being square in plan. The compartments at the angles again are divided diagonally, by less prominent mouldings; so that there is an octagon within the square of the whole ceiling. The centre one of the nine compartments is made the most ornamental. Much might be got out of such an idea for a ceiling. In the Assembly Room of the Town Hall, Berkhampstead, a building Gothic in style, and very suitable in character for the chief public building of a small town, — the side compartments of the span of the ceiling, which are flat, are divided by spandril brackets, or cantilevers, to the tie-beam; but the middle compartments take the form of a waggon-headed vault; thus useful addition of height to a low room is got out of the space between the queen-posts, and novel and decorative character are made to result. One of the best of the designs, is one for the "Principal Entrance for the Public Garden, Oporto, to be erected." This work is Italian, and ornate in character, in both respects differing from the majority of the designs. Amongst Mr. Lamb's studies is one for an arrangement of window, novel and adapted to his variation of Domestic Gothic architecture. It is divided by a transom; but there is no mullion, except in the upper half of the window. The transom in fact takes partly the form of a low four-centred arch to the lower half, which is filled in with a sash. By the arrangement, there is no impediment to leaning out from the window, or to view of the country; and it has evidently become a favourite arrangement with its author. But we apprehend that the window would not open at the top. Now that it is generally felt that rooms cannot be ventilated unless the windows open both at top and bottom, a recurrence to the old system of hanging the lower sash only, cannot be viewed favourably.

A view of the interior of the Oxford Corn Exchange (271) is exhibited by Mr. S. L. Seckham. The most prominent feature, besides the open roof, is a gallery which is carried on segmental arches that spring from corbels, and from which depend the globular lights. Red, yellow, and black brickwork in piers, and some Gothic details, give the general character. The slopes of the roof up to the queen-posts are glazed; whilst a *plafond* or ceiling is formed on the collar, divided into panels, and having the chief parts enriched with colour.

A view (192) of the hotel which is in course of erection at Brighton, in the King's-road, for a company, is shown by the architect, Mr. John Whichcord, who we can hardly say has made the design very effective, or overcome the difficulty of combining verandahs and balconies with details of the structure itself. These latter are Italian, so far as they can be described. The building will have considerable height, there being six stories of balconies above the ground-line, or level of the esplanade, besides stories in end portions of the building, forming towers or pavilions; and there is a frontage on the beach to a story below the esplanade.

Efforts continue to be made to combine the use of coloured materials with Pointed arches and details more or less Gothic; but there is little mitigation of the harshness of the colours and forms that has so long characterized the attempts. Drawings indeed generally show the red, black, and blue, much too glaring, even taking the building as seen when new; and smoky atmosphere obscures the effect of brickwork even, with great rapidity. But judging from designs and works, the idea seems to prevail that arches need only be pointed, and black and colour in archivolts and courses, only introduced, to make *ipso facto* good architecture. Some of the works to be seen now-a-days, and for which we hardly know whether we ought to credit the copyism of Italian Gothic, or sheer want of art-feeling, would have been discreditable in the worst days of "Carpenters' Gothic," or of thirty to forty years ago. We will not name the worst of the productions which are in the Exhibition, that justify these observations; but one that we have in mind, is the case of a building in a very prominent position in London. If it should be said, as lately by some, that there is nothing in the form itself of the pointed arch, to recommend it, or not, we have more than doubt whether a form that is almost that of a lancet, should be used in a building having several stories, when the form has no office beyond what would be attained by that of a relieving arch of less rise, and beyond the framing-in of a space filled with red and black brickwork, or tiles, innocent of any beautiful or remarkable feature of interlacement or pattern. Much work of this class seems lately to have been produced in the northern and midland manufacturing towns; and doubtless, that has been with a view of answering to the demand for something that might not be discoloured by smoke. If any one will look, however, at the effect of decorative brick buildings in London that may have been admired at the time of their erection, and have had but half-a-dozen years' life and exposure, he may be surprised at the slight evidence that they afford of any very surpassing advantages of brick, as the material generally is and when applied decoratively. Glazed surfaces, if used, are the only parts that retain their pristine freshness: so that in point of fact, the original balance is destroyed; the contrast between the clean and the blackened surfaces becomes yearly greater and greater; and the building looks dirtier than otherwise it would. It would not be within the scope of the notice of an exhibition, to seek a remedy for this condition of things: the question of smoke-nuisance is forcing itself into recollection continually, and when we are treating many subjects: we here content ourselves in reiterating that it is almost hopeless to look for good art in architecture, so long as the nuisance continues, and in saying that the recourse to brickwork by no means purchases immunity from the difficulty. The subject arises in connexion with the Architectural Exhibition, only because of the evidence which the display of drawings in Conduit-street annually affords, not merely of partial failure in intended effect, such as we have spoken of, but also of prejudicial results on the art of those who, responding to such demands as we have seen expressed by newspaper writers and others who have supposed architects to be blind to the capabilities of brick, make great display of the coloured materials. In Birmingham especially, some of the architects are frequently aiming at effects through the medium of these materials, with Gothic details, and in buildings in the principal streets of the town. A drawing of a structure of the class at Birmingham, an ironmonger's shop, erected from his designs, is exhibited by Mr. J. G. Bland (289). It has some good features, but with them are others meant to be Gothic, which are harsh and objectionable. Such are the forms of the heads of the windows,—albeit here, curves with centres below the line of springing, and not lancet arches, are used. Whether the resultant effect be due to want of harmony with other and what is general street-architecture, we cannot exactly determine: but those who are making like attempts with this kind of materials, should be told that they have not yet succeeded in affording a sufficient substitute for stone, or the art which is demanded in architecture. The architect above named, exhibits a drawing (133) of another

building, but in a different style, in the same town, "The Gold Pen Manufactory," erected for Mr. Wiley. Altogether, in it, there is such an amount of work attempted by colour, or recesses and projections of brickwork, that we are offended when we come to the sky-line, and find a want of symmetry between one of the two pyramidal roof-capped towers, and a portion of an attic story, with tall chimney, in the same front. There are merits, however, that call for recognition, in the use of the arch-headed recesses in which the windows are placed, and in the treatment of the upper portion of the building as an arcade enclosing two tiers of coupled window-lights.

Several designs, all Gothic, and having a strong family likeness, are shown by Mr. J. P. Jones. Defects in them, are not of the style, and ought to be corrected, for the realization of full value from the features which the architect shows he can design. We apprehend it is a defect, as in the building in Essex (exact site not stated in the catalogue) to plunge a clock-tower into the angle of a structure, or without either corbelling, or lines rising from the ground. In the same work (drawing No. 65) a want of symmetry seems to be expressly designed. One half of the structure has an arcade on the ground story: the other half has no such feature; but has a loggia in the story above ground. These things *may be* right; but they are not according to teaching when we were young, and not yet abandoned. It is difficult, nay impossible, whilst undesirable, to put into words, rules for everything; but there must be something capable of enunciation on this matter of symmetry, to tranquillize the minds of perverts or of those who only may become such. The modern practice of providing for a multitude of objects or occupations in one building, however, creates great difficulty, and has no doubt tended to prevalence of a style in which want of the *classic* symmetry has not been thought a disadvantage. The present design seems from the title, to include more than one institution, besides an important residence. The "Proposed Municipal Offices for Stockport" (308) by the same hand, are better, because having at least a symmetrical arrangement of centre and wings, which the contrary treatment of the ground story does not overcome. The ends of the roof are carried up in the manner of pavilion roofs; but the architect appears to prefer with such roofs, the arrangement of an unbroken front, and the omission of lines rising from the ground. We would only say, we hope there are reasons for such variations, at least in the architect's own mind, other than the mere desire of doing differently. The same architect, contributes one to the large number of towers, which,—erected as memorials, or in market-places, where they carry a clock and bell,—have now sufficient resemblance to constitute a class in the buildings of this second half of the century. The design now before us, which, though plain, is not the worse for that, is for the "Albert Tower, to be erected near Eastbourne" (273). The "Prince Consort Memorial Design for Clock Tower, at Hastings" (68), by Mr. R. O. Harris, is of the same family: but the design, so far as we can see the drawing, appears more elaborate in its coloured brickwork, and its stone lantern. A design for a memorial to the late Prince, by a different hand (69), is not a favourable presentation of the obelisk form of monument. In this case, the base is surrounded by columns, each of the four fronts being concave on plan. Neither is another architect successful in a different treatment of the obelisk form, in a design (335) for a different memorial, in banding the obelisk (here made octagonal on plan), with horizontal red lines, no doubt of brick. There is much to be said on both sides of the question of the use of the obelisk form; but, should assent be given to the use, the æsthetic principle, as well as the structural, of the single stone, would be found correct. The pedestal in this design has Gothic details; a second design (207), by the same architect, is Classical.

Another article will conclude our series of notices of the drawings in this Exhibition.

## ON MEDIÆVAL STUDIES IN PALESTINE.

A LECTURE on the above subject was delivered on Tuesday evening last in the Theatre of the South Kensington Museum, before the members of the Architectural Museum, by Mr. G. J. Wigley. He said that the latest illustrations of the interesting subject on which he was about to address them were the complete set of photographs by Salzmann, taken in the year 1854, during his (Mr. Wigley's) sojourn in the Holy Land, and which were afterwards publicly exhibited at the Crystal Palace. There was also a very beautiful set of photographs of some interesting Mediæval monuments in Palestine, taken by Mr. F. Bedford, who accompanied the Prince of Wales on his tour through the East, and which were then in the room. There was at the present day quite a constellation of authors who had written, not only about the Holy Land, but more particularly about the remains of ancient architecture which were scattered over it. Amongst these the work by the Rev. George Williams, of King's College, Cambridge, entitled, "The Holy City," was especially worthy of being noticed as containing a description of some of the Mediæval monuments in Palestine which possessed the greatest amount of interest for the student, the architect, and the antiquary. The crowning work, however, upon the Mediæval architecture of the Holy Land, was undoubtedly that of his (the lecturer's) fellow-traveller, Melchior de Vogüé; and the present lecture would be more or less a review of portions of that able and instructive work. First as to the architectural importance of the Holy Land. People who were not well acquainted with the subject were under the impression that it contained a great many ruins, but was a country that was of very little importance, architecturally speaking. That was a great mistake. It was in the Holy Land that the Christian school of architecture was first developed. From the time that our countrywoman, the Empress St. Helena, visited the Holy Places, in the beginning of the fourth century, until the conquest of Syria by the Mahommedans in the beginning of the seventh century, the Holy Land was jewelled all over with Christian churches; and if but few of them, comparatively speaking, were remaining, it was because the power of destruction possessed by the Turks was greater than the power of construction possessed by the Christians. At Bethlehem, the birthplace of our blessed Lord, there still stood a basilica, containing vestibule, transept, nave, and double aisles on both sides, with columns. An able writer attributed the basilica to Justinian; but on comparing the masonry, the style, and the details with the well-known church of Justinian at Jerusalem, there could be no doubt that the basilica of Bethlehem must be attributed to a much earlier period, and most probably, as was the almost universal opinion, to the reign of Constantine. The basilica possessed all the most admired features of the Roman school, with others which were peculiar to itself. Its columns were of the red marble found in that country. The length of the church was about 200 feet; and an additional proof as to the time of its construction was furnished by its straight cornice supported by columns, as was common in the time of Constantine, and not by arches, as in the time of Justinian. The basilica had been adorned in many parts with mosaics by Greek artists. The roof was originally open, as in the case of the basilicas at Rome. The roof had, however, been frequently renewed, the last time with the assistance of Edward IV. of England, who furnished the lead for the purpose, the Duke of Burgundy paying the residue of the expenses. The lead had long since gone into the melting-pot to make bullets for the Turks. It was last repaired in the year 1842. This was the first and earliest Christian monument in the Holy Land, and perhaps in the world. Of all the objects which are invested with a great amount of attraction for European travellers in the Holy Land, the foremost is the Holy Sepulchre. There was much reliable information extant as to the different churches that were raised on its site or in its immediate vicinity. It was stated by Eusebius that Constantine built there a large basilica, very much of the same charcter doubtless as that erected at Bethlehem. It had, according to him, double aisles on both sides, and also a magnificent gallery over those aisles, of which the triforiums in our cathedrals represent a feature, but on a very small scale. According to generally received opinion, the Holy Sepulchre must have been in the very centre of the basilica of Constantine. The basilica was destroyed in the seventh century. It was repaired subsequently, but with very much less means than Constantine could have devoted to the purpose, or than were necessary for its restoration; but it is believed that the semicircle marked out by the apse of the basilica was made into a circle in the reconstruction of the building. The first basilica is spoken of by Antoninus, of Piacenza, as having had its altar in front of the Holy Sepulchre; so that the latter was not left in a kind of churchyard, an opinion which some persons entertained. Such was its position at the time of Constantine, and for some centuries afterwards. After the destruction of the building in the seventh century, the Holy Sepulchre became the centre of a group of detached chapels, covering different sanctuaries. They were the small chapel over Calvary; the rotunda over the Holy Sepulchre; the little church of St. Helena, stretching out at a much lower level, and several others. So they continued until the eleventh century; but in the year 1010 many of the churches of Palestine were destroyed by order of the Caliph Hakem. The churches of the Holy Sepulchre were, however, afterwards restored very much to their former state. On the arrival of the Crusaders in 1099, the several churches underwent a complete renovation. The Crusaders did not destroy anything they found: on the contrary, they restored and completed that which had been wholly or partially destroyed. They used the rotunda of the Holy Sepulchre as the nave of their new church, and added a sanctuary and transept, which it might well be conjectured occupied the position of the nave and aisles of the basilica of Constantine. The Holy Sepulchre stood at the west end of the present church; and there was good reason for that arrangement. When Constantine built the church there, the whole of the rocks which surrounded the hill of Calvary, and the rock in the flank of which the Holy Sepulchre had been cut, after the fashion of Jewish sepulchres, was almost all carved away; and the Holy Sepulchre, in fact, remained merely as a shell of rock; and it was impossible that the excavation could have been carried farther westward for the purpose of placing the nave and aisles in that direction, as the level would have been much higher than the sanctuary itself. For these reasons the great body of the basilica of Constantine and of the present buildings was placed to the east of the Holy Sepulchre. The style of the church built there by the Crusaders corresponded with the European style of that date. It is conjectured to have been opened about the year 1140, and it possesses all the characteristics of the Romanesque style of that period, more particularly as it was adopted in the erection of French churches. It had, however, a marked characteristic, which distinguished it from the churches of Europe, namely, that its arches were pointed. This example of the pointed arch was not by any means unique, as pointed arches were to be found in almost all the churches of Palestine, even in those which were built at a very much earlier period than the time of the introduction of the pointed arch into Europe. There were, he believed, only two churches in Syria and Palestine in which semicircular arches were to be found; but in these cases pointed arches were also to be found. At the time of the Crusaders the pointed arch was universally used throughout the East; numerous instances of it were to be found, for instance, in the mosques of Damascus and Cairo. The Crusaders adopted the prevailing fashion, and in the carrying of it out they employed the workmen of the country; nor did they confine their adoption of the style of the country to the pointed arch; they extended it also to numerous details of ornamentation. On this subject of the pointed arch he was somewhat at variance with his author, M. Melchior de Vogüé, who evidenced in his work in this respect a little feeling of nationality, and had a leaning towards the Gothic of France, and he took him (the lecturer) to task for asserting that the Pointed architecture of the twelfth century proceeded from the Holy Land. It was admitted in the volume that all the buildings erected by the Crusaders had pointed arches throughout, but it was asserted that the pointed arch existed partially, at least, throughout Europe at the same period, and that even if it had not existed at all in the Holy Land, it would have grown up in Europe as it has done. It was much to be doubted whether facts warrant such a conclusion. The churches of the East built at the commencement of the twelfth century were filled with pointed arches,—in a whole series of churches to the number of sixty, that existed still of the time of the Crusades, they were to be found. At that period the attention of Europe was directed to the Holy Land, and the result was the introduction, to some extent at least, of Eastern customs, policy, and laws, and he (the lecturer) had also come to the conclusion that it resulted also in the adoption throughout Europe of the pointed arch. He was aware that the Gothic style, so far as it could be called a style, was chiefly made up from the Romanesque school. Its plans, arrangement, and outlines certainly proceeded from that school; but it seemed to have received from the Holy Land its finishing touch and impulse, namely, the pointed arch. The church of the Holy Sepulchre was not the only example of Mediæval architecture in Jerusalem. Count Beugnot mentioned in his work on the Assizes of Jerusalem that he found amongst the MS. of a French

library records of no less than twenty churches built by the Crusaders in Jerusalem, and the whole or portions of each of them could still be identified. The next in point of importance to that of the Holy Sepulchre was the Church of St. Anne, at the north-eastern extremity of Jerusalem. It is supposed to have been built very soon after the Church of the Holy Sepulchre, and is 120 feet long by 60 feet wide, the centre nave being 24 feet, and the aisles 18 feet wide. It had no triforium, which hardly existed in the case of any church of the twelfth century throughout the Holy Land. The vaulting was groined without ribs—with plain waggon vault in its transepts. It was only towards the end of the twelfth century that ribs were introduced in vaulting. Over the centre of the transept the church was lighted by a cupola. The cupola was to be found in many of the churches of the East; it was borrowed from the Arabs, and afterwards introduced into southern Europe. The adoption of terraced roofs allowed the architects to treat their space much more agreeably than was found to be the case in the churches of the West. It was seldom that any sign of a belfry was to be found. In the Church of St. Anne a tower or minaret now existed, which did not form part of the original structure. It was, in fact, built in the year 1842, while the church was used as a mosque. He was happy to say that it had ceased to be a mosque, as in the year 1856 it was presented by the Sultan to the Emperor of the French, and it was likely soon to resume its character as a Christian church. A French architect had been sent out with a view to its restoration, and it was to be hoped he would treat it in a conscientious manner, so that in truth it would be a complete restoration. After the Church of St. Anne, the building that attracted especial notice from all European visitors in Jerusalem was all that now stood of the Great Knights' Hospital of St. John. He regretted to say that very little remained of it. The church which was originally attached to it was nearly destroyed. There were a few arches still to be seen, but they were disfigured by being not only the ruins of a Christian church, but also of a mosque, into which it had been turned. The space occupied by the Great Hospital stretched right into the town. It now looked like a field covered with grass, which covered arches and architectural remains. The hospital was a large square double-storied cloister, around which the buildings extended; the entire occupying a very considerable area. It is said by historians to have afforded accommodation to 2,000 sick persons and to 400 knights. The only striking architectural features to be seen at present of the Great Hospital were a series of five or six arches that now formed a part of one of the streets of the bazaar, and also some curious arches, evidently belonging to the Great Hospital, but now forming a part of the little Greek church, called the Church of St. John the Baptist, which was erected, as the Greeks contend, on the spot where the town house of Zacharias stood. The Church of St. Mary the Great, so called to distinguish it from another church, called the Church of St. Mary the Less, is supposed to have been built by the community from which the Knights of St. John ultimately arose. Towards the beginning of the eleventh century, certain merchants of the town of Amalfi, in the kingdom of Naples, who were in a very prosperous position, rebuilt the hospital close to the Church of the Holy Sepulchre, and called it the Church of St. Mary the Latin. They built also a place of residence for female pilgrims, which was in the hands of a community at the end of the twelfth century. There still remains part of the north wall, and also of the cloister adjoining it, though it has been very much altered in character by the repairs which, from time to time, it underwent. The peculiar characteristic of that church, by which it is distinguished from the Church of St. Anne, is that, although the greater number of its arches were pointed, the side window on the north side, as well as the doorway, were semi-circular, and it also displayed a greater amount of ornamentation than any of the other churches of Jerusalem. The Church of St. Mary the Latin, which stood in the immediate vicinity of the Holy Sepulchre, consisted of a single nave and apse, of very plain kind of architecture, but not at all uncommon in the Holy Land. This was the case of one of the earliest churches in Jerusalem, where, according to local traditions, the faithful met, on the spot on which it stands, in the time of the Apostles — the church of St. John Mark. The word "basilica" included not only buildings used for public purposes, such as halls of justice, but it was also applied to the chief hall in Roman mansions, a fact which seemed to be forgotten when the basilica was spoken of as the type of all Christian churches in the East and throughout Christendom. The development of the type was mistaken for the type itself. At the outset of Christianity public worship was conducted in the houses of Christians. Afterwards, as the numbers increased, single-nave churches were built; and they were still to be found in many parts of the Holy Land and the East. With respect to the buildings which occupied the Temple area, very little remained to mark their use as Christian churches. The Church of the Presentation of Our Blessed Lady, erected by Justinian, consists at present of a nave and no less than three aisles on each side. Two hospitals were added to the church, which may be believed to have occupied the space of the two aisles erected by the Mahomedans since. The ruins of the hospitals probably suggested the erection of the two additional aisles. In the north-east part of the town stand the remains of a very interesting church, that of St. Mary Magdalene. It was very much like the Church of St. Anne, and was especially plain and without any display of ornamentation. It had the additional feature of a more prolonged choir, and also shows some remains of wall painting. In the same part of the town the remains of several small twelfth-century churches are to be found. Amongst them the Church of St. Peter, now a mosque, and also a tiny church about 20 feet square, but which, notwithstanding its diminutive size, contains nave and aisles, and all the features of a Mediæval church. It is said by the Greeks to have been erected on the spot where the Blessed Virgin was born. M. de Vogüé's volume contained not only a full and most interesting description of the churches inside, but also of those outside Jerusalem; as, for instance, the church which stood on the spot from which our Lord ascended, and full detail and accurate drawings of the churches are given. Following the Crusaders to Cyprus, most interesting remains of Mediæval architecture would be found there, in which the Eastern character was less mingled with European features. There were in Nicosia and Famagosta several examples of the churches of the thirteenth century, and also remains of the monastery of Lapaïs, containing cloister, refectory, with stone pulpit for the reader, chapel—consisting of nave and aisles—all most completely built. To this building there is a local tradition attached, to the effect that our blessed Lord resided there for some time. Very few buildings of a later date than the thirteenth century were to be found in Cyprus. The cathedral of St. Sophia at Nicosia was a magnificent specimen of European architecture. In Rhodes many remains of the architecture of the fourteenth century were to be found, not scattered at considerable distances from each other, but grouped in the immediate vicinity of the quarter where the knights resided. The Mahomedans have altered very little; they built very little, but what they found they allowed to remain as they found it. The Grand Hospital of the Knights consists of a large quadrangle with double cloister, beyond which is the street in which the knights lived. At the lower part of the street, which is paved with white marble, an interesting church—now used as a mosque—was to be found. It was dedicated to St. Catherine, and is in good preservation. The Priories of England, France, Spain, Portugal, &c., are also to be found in the same street, as well as the great Church of St. John, which was a very stately structure, although not so considerable as was afterwards erected by the knights in Malta. It was of Italian Gothic style, while the greater number of other churches were of French Gothic. The roof was open and plain. Unfortunately it and the buildings in the vicinity have recently been very much damaged by the explosion of several barrels of gunpowder, which had been stored in it by the Turks. Some of the old fifteenth century guns were still to be found standing on the ramparts, and he (the lecturer) saw, covering the touch-hole of one of them, a piece of a breastplate which had been used during the last siege.

He had endeavoured to give some idea of the extensive and interesting architectural remains which were to be found in Palestine, Cyprus, Rhodes, &c., whereon the Crusaders settled. In a single lecture the subject could only be touched on; but if he had created in any of his hearers a desire to pursue the study, the end which he had in view would be accomplished.

Mr. Gilbert Scott said that the Mediæval monuments of the East furnished a most interesting subject of study, which would enable the student to see what Christian churches were from the introduction of Christianity, and how, at a later age, the architecture of the West acted upon that of the East; and also the manner in which that of the East reflected in its turn upon the architecture of the West. They would also see how both were affected and in part supplanted by contemporaneous Mahomedan architecture. The subject afforded ample scope for research—as to the identity of the Sacred Sites, and as to how far the pointed arch was the result of the natural development of the architecture of the West, or whether it was in any degree, and if so, in what degree, derived from the East. These and other branches of inquiry hung upon the subject which Mr. Wigley had ably treated, and he hoped that on some future occasion he would follow up the general facts he had laid before them in so interesting a manner, by dealing with some of the questions arising out of it, in detail.

A vote of thanks to the lecturer terminated the proceedings.

## SOCIETY OF BRITISH ARTISTS.

ALL who have been accustomed to pay their annual visit to Suffolk-street, will look for their old favourites, and will be glad to find the President of the Society, Mr. F. Y. Hurlstone, giving, with little apparent labour, continued proofs of his ripened skill and talent. It may be supposed he has seen many such a dusky-complexioned coquette as he here presents to us in (207) "At Seville," with a thorough appreciation of the picturesque attitude and *physique* of the model; in this, as in (444) "Mezza Jiorno," and (460) "Boy with Lamb," two powerful sketches, his innate taste for colour is convincingly pronounced. Mr. W. Salter, too, relies more upon colour than form, and deserves credit for the judgment with which he has selected his subject (196), "The Interview which took place at the Village of Caversham, near Reading, between King Charles I. and his three younger Children, the Duke of York, Duke of Gloucester, and the Princess Elizabeth, in the presence of Cromwell," and if he do indulge in a little latitude occasionally, it is not beyond the restriction of possibility, as in this case. Cromwell *might* have been a witness of the king's tenderness for his young, innocent, helpless children, and if the circumstance be somewhat apocryphal, we give Mr. Salter the benefit of the doubt. Hitherto Mr. Baxter has enjoyed a monopoly in his peculiarly fascinating adaptations from rural nature: so pearly and peachy-skinned is his ideal, that she must live in an atmosphere of her own, where the dew is kalydor; and in a neighbourhood where all feminine babes are born with a metaphorical parasol in their mouths, as well as the proverbial silver spoon with which they are nourished upon a normal aliment of strawberries and cream! This year only one of his agreeable creations graces the rooms, and this (51) "The Ballad" is not one of his best; so that Mr. J. J. Hill, who appears resolved to try a race with him for the possession of that same parasol and silver spoon, finds the running easier than he sometimes may do, and wins by a neck and shoulders, to say nothing of the pretty head that tops them under conditions,—to carry the figure a little further (and the artist does no more),—that leave identity more to the name than the colour of the painter: *vide* (491), "Contentment." Another exceedingly pretty work of his is (74), "Spring." Prettiness seems the chief end in view of Mr. E. J. Cobbett also, in (108), "Fern Gatherers," and the many other of his agreeable presentments of cleverly painted, cleanly washed children. (38) "The Proposal," by the same, shows that the nicety with which he finishes the draperies of ragged home-spun that clad his gleaners, is equally effective when employed upon other materials. The lady's head is not agreeable. Mr. Henzell, who may be classed with Mr. Cobbett as a delineator of peasant life, and with him leading the van of an innumerable retinue, sufficiently distinguishes himself by the interest with which he manages to invest (43), "Feeding the Calves," and similar little domestic incidents. More popular still is the speciality of Mr. W. Hemsley, because in addition to his manipulative skill, his emulation of the old Dutchmen extends to a considerable comprehension of humorous expression. (602), "A duet" is an admirable example of this. Mr. T. Roberts belongs to the same school, only, with the preference of truth to affectation which characterises it, he differs in selecting the more pathetic phases of every-day life, seldom using much above common-place. However, he manages to propound a moral worthy of recollection in (87), "Reading the Scriptures," and the good young lady so earnest in her solicitude for the poor cottager's mental comfort, is a fair type of those,—and there are

many of them!—who command the respectful admiration of all.

Of an almost extinct category, alas! Mr. J. Noble's "Incident from Mr. Pepys's Diary, 1662" (26), is satisfactory enough to excite regret for its decline, although like Mr. D. Pasmore's Alchymist (75), "The Elixir of Love," it scarcely exceeds a suggestion of something much better; and were it not for a far more appealing exponent, we should scarcely have had to refer to it. For this we have the pleasure of bowing our congratulations and grateful acknowledgments to Miss Edwards, who appropriately assists us in elucidating the capability of even old, worn materials being made acceptable by novel treatment. (407) "Catharine Glover and the Glee Maiden attempting to succour the imprisoned Duke of Rothsay: — Fair Maid of Perth," might be an extract from many an old catalogue, and numerous illustrations of the subject occur to a very general memory; but the strict propriety of costume and the elegance of the composition and production, with considerable brilliancy of colour, render it a very attractive performance, indeed, upholding classic romance as an inexhaustible source, at a time when a hat and bonnet, black coat and bo-peep fever promise to shut it up quite. To that dream-land of which Mr. A. J. Woolmer is the avowed "*genius loci*"—

"And *makes* a sunshine in that shady place,"—

he seems to have consigned most of his models too; for they are nearly all asleep, all enchanted in his mazy mysterious bowers, where their positions and cold-catching liability, conjoined with an ever-present mistiness, through the haze of which everything loses decision of form, hints a suspicion that they have suddenly succumbed to the influence of some narcotic incense, the secret, alike with the rest of his art, of the practiser. He is a genius who, if he sets at defiance ordinary laws and rules, can create others at his exigence, for without some such guidance it would be difficult to account for the perfect harmony that signalizes his most erratic conceptions. Confessing to an admiration for as much as we understand of all he does, (238) "The Bride," because she is so gracefully drawn (and, moreover, awake, up, and dressing), will serve for particular encomium.

The weight of the exhibition is borne by the landscape painters, and Messrs. Pyne, G. & V. Cole, Boddington, Clint, Gosling, Pettitt, Syer, Tennant, &c., are equal to the occasion. The prolific pencil of Mr. Pyne has furnished him with little short of a dozen exemplifications of his knowledge and executive facility. Mr. Boddington, scarcely less fecund, still delights in mountains, rivers, sedges, and brakes, stereotypes now of what was his early forte, and with Messrs. Tennant, Clint, and others, can evoke no remark that can add to repeated eulogy. Mr. G. Cole more emphatically asserts fresh study: his "Approaching Storm in Autumn—the last Load" (31) brings him prominently forward, and, allowing something for exaggeration, conveys a notion of a grand natural effect; Mr. Vicat Cole's "Road over the Heath" (95) is less likely to challenge question, and (295) "A Cornfield—Harvesting," just as little. Of Mr. Gosling's "Summer on the Thames" (202), the chief feature is its truth, and it is worthy of all commendation on that account, as most of his works are. There are so many other productions that claim examination and merit praise that we do the least and most we can for them, by designating some of them, such as Mr. Morgan's clever characteristic bits (5), "The Breach of Promise of Marriage," and (603) "Out of Work" (really admirable!); (20) "The West of Ireland, 1860," by G. W. Brownlow; (62) "The Look-out," P. R. Morris; (67) "The Woodhouse," J. S. Cavell; (101) "Fox and Goose," J. W. Haines; (128) "Dinner Time," W. Bromley; (146) "Summer Time and the last Magazine," W. M. Hay; (163) "Sugar," and (294) "Fresh Eggs," J. Hayllar; (245) "Still Life," Mrs. Anderson; (251) "Happy Hours," E. C. Barnes; (277) "The Village Pond—Winter," G. A. Williams; (285) "The Morning Call," G. Pope; (290) "The Valley of the Lledr, North Wales," an exceedingly fine landscape, by S. R. Percy, and (300) "At Oakham, Surrey," as beautiful in its way, by F. W. Hulme; (313) "Morning—the Mist clearing off," A. Gilbert; (326) "The Kaleidoscope," W. Bromley again; (328) "Fruit, Flowers, &c.," W. H. Ward; (336) "Juliet," T. F. Dicksee, and (443) "For the Opera," by the same; (385) "Labour's Sanctities," T. Heaphy (this deserves more than passing mention); (405) "On the look out," A. F. Patten; (505) "How do you like me?" (very well!) W. D. Kennedy; (575) "The Spring," C. Dukes, and (614) "Tuning up," F. G. Price.

There is much extra attractiveness in the water-colour room, in a great measure produced by Mr. T. F. Wainewright's superlative delineation of sheep compositions.

## HOUSE-TOP AIRING GROUNDS.

AT the suggestion of Dr. Horace Dobell, who is amongst those desirous to lead architects to make appropriate designs for the conversion of the tops of houses into private airing-grounds for the inhabitants of the houses, Mr. J. L. André has recently produced some designs and models which go part of the way. Some of these were exhibited at a late meeting of the National Club in Whitehall Gardens.

The following are the principal requirements of the plan to which Dr. Dobell has directed attention:—

"1. That the space now wasted at the tops of houses shall be made use of in such a manner as to provide for each house an *airing-ground* open to the sky (the extent of which shall be not less than three-quarters that of the ground on which the house stands), in which the inhabitants of the house can take the air and follow out-of-door pursuits, and in which children can engage in gymnastic exercises, free from the crowds of the streets and from the damp unwholesome atmosphere of back gardens, yards, or areas.

2. That the arrangements shall be applicable to low-rented houses suited to the working classes, as well as to others of a better class.

3. That the arrangements shall be particularly suited to streets, lanes, and closely-packed houses.

4. That protection of the house from wet shall not be interfered with.

5. That the airing-grounds shall be protected from the down currents of smoke from the chimneys.

6. That they shall not be visible from *the fronts* of the houses facing the public thoroughfares.

7. That perfect safety shall be secured from any danger of persons falling over while using the airing-grounds.

8. That the form of inclosure employed to provide against the danger of falling over shall not interfere with the free circulation of air within it.

9. That rooms shall be provided *on the level of the airing-grounds*, from the windows and doors of which parents can watch their children while they themselves continue their work.

10. That the airing-grounds shall be conveniently and safely accessible from the inside of the houses through the doors of the rooms on the same level with the grounds.

11. That the airing-grounds shall be separated from each other, but conveniently and safely accessible from those of the adjoining houses, and safely and conveniently accessible from the public thoroughfares, so that *a ready means of escape shall be provided* in case of fire, and also easy access to the upper parts of the houses by firemen."

Enough has already been done to show that there is nothing impracticable as to all that is good in this plan. It only requires endeavours on the parts of architects and builders to get over some of the first difficulties; and we might soon see it carried out on a very extensive scale in London and other large towns.

## STRUCTURES IN THE SEA, WITHOUT COFFER-DAM.

### INSTITUTION OF CIVIL ENGINEERS.

AT the meeting on March 31st, Mr. Fowler, vice-president, in the chair, the paper read was on "Structures in the Sea, without Coffer-dams; with a Description of the Works of the new Albert Harbours at Greenock," by Mr. D. Miller.

It was stated that the immediate object of this paper was to treat of the various methods of constructing the foundations of quays, walls, piers, or breakwaters, for the formation of docks and harbours in deep water; and to describe works of this kind which had been carried out on principles different from those usually practised, and to point out the further application of these principles to other structures of a similar nature.

The plans which had chiefly prevailed were, founding on piling carried up to about the level of low water; constructing within caissons or coffer-dams; or building under water by means of diving apparatus. Instances of the failure of the first of these methods, which was believed to be inapplicable where there were marine worms, were given. The second was most effectual, but was generally expensive, and often attended with danger. The last was also costly, besides being subject to delay in the progress of the works. In bridge-building, of late years, the plan of forming inclosures of close piling of the shape of the pier, and filling in with hydraulic concrete, had been pursued by French engineers; and the substitution of iron for perishable timber piling, in the construction on this plan of the piers of the Chelsea and Westminster bridges, by Mr. Page, was considered to be a successful departure from stereotyped rules.

Although the value of béton or hydraulic concrete was now appreciated in this country as a substitute for masonry, and had been employed in some important works, yet its use was chiefly confined to forming a homogeneous and monolithic bearing stratum for foundations, and not, properly speaking, as a constructive material. The modes in which concrete had been applied for constructive purposes were, building it dry in mass, and allowing it to set before placing it in the work, as had been adopted in the construction of the walls of the Victoria and of the London Docks; preparing it first in blocks and allowing it to harden before being used, as employed at the Dover Breakwater, and for the new sea forts at Portsmouth and Plymouth; and depositing it in a liquid state, and allowing it to set under water, as practised at the Government graving-docks at Toulon. The facilities for making béton which had the invaluable property of setting under water, and of thus forming an artificial rock or stone, were very great; as it might be made either from the naturally hydraulic limes, the artificially hydraulic limes or cement, or from the rich or non-hydraulic limes, rendered hydraulic by the admixture of other substances, such as puzzolana, minion, or iron mine-dust. Various examples were adduced of the application of concrete, on a large scale, prepared from these different materials, especially at the mole of Algiers, at the breakwater at Marseilles, and at other French ports, as well as in the Pont d'Alma over the Seine, in which case both the arches and the piers were formed of rubble concrete.

As engineers-in-chief for the new harbour works for the port of Greenock, the author and his partner, Mr. Bell, had an opportunity of introducing a system of constructing sea walls and quays in deep water, without the aid of coffer-dams, diving apparatus, or other means equally expensive. These works were situate on the west side of the town, and had been projected almost entirely beyond the high-water line into the sea. The outer pier would ultimately be upwards of 3,000 feet in length and 60 feet wide at the top, with quays on both sides. Within this there would be space for two harbours, each 1,000 feet in length, 15 feet deep at low water, and 25 feet at high water, with entrances 100 feet wide, and ample room for the construction of graving docks, for the storing of timber, and for the erection of sheds. At present it was only proposed to erect about one-half of the sea pier, and to form one harbour or tidal dock. In the design of these works, it was suggested that the walls under low water should consist of a combination of cast-iron guide piles in the front, with a continuous stone facing, slid down over and inclosing these piles; timber-bearing piles being used in the body of the walls where required, and concrete backing being deposited in a soft state; and that the upper part of the walls should be built of masonry in the usual manner. The first operation, when the water was not sufficiently deep, was to dredge two parallel trenches to the required depth, 17 feet below low water, for the foundations. A staging of timber piles was afterwards erected in the line of the pier over its whole breadth, for carrying the tramways, travelling cranes, and piling engines. The cast-iron guide piles were then driven from the staging, with great precision, 7 feet apart in the line of the face of each quay wall. These piles were driven until their heads were near to the low water line, by pile engines furnished with long arms projecting downwards, strongly stayed by diagonals, and forming a trough into which the pile was placed, and from which it was shot, like an arrow from a cross-bow. The piles were connected at the top transversely by wrought-iron tie-rods stretching through the pier. When the piling was driven, a bed of hydraulic concrete, 3 feet thick and 20 feet wide, was deposited in the trenches to form a base for the wall, and to give a large bearing surface. Into the grooves formed by the flanges of the iron piles, large granite slabs, from the Ross of Mull, from 18 inches to 2 feet thick, were slipped, the bottom one resting on the concrete base, and on a projecting web cast on the piles. This constituted the face of the wall; and in each compartment between the piles, 16 feet

in height and 7 feet in width, there were only three stones. Behind this facing hydraulic concrete was lowered under low water in large boxes having moveable bottoms, and was discharged in mass to form the body of the wall. To confine this at the back before it had set, loose rubble stones were deposited. The hearting of the pier consisted of hard till, stones and granite, up to the level of low water. When the whole of this mass was consolidated, the heads of the iron piles and the granite facing blocks were capped by a granite blocking or string course, and the upper portion of the walls was built in freestone ashlar and rubble. The remainder of the hearting between the walls was then filled in, and the whole finished with a granite coping and causeway. The walls were 33 feet in height from the foundations, 11½ feet thick at the concrete base, diminished to 5 feet at the top. In the part of the work already executed, the outer flange of the iron piles was exposed to the action of the salt water. In future it was intended to reverse this plan, and to make grooves in the stone facing, so that it should overlap the iron piles, filling in the grooves from the top with cement. When the whole extent of the seaward pier was completed, the interior operations for the harbour would be proceeded with; this pier serving as the principal coffer-dam, and a short dam, about 100 feet in length, closing the entrance. It was stated that this mode of constructing walls in deep water without coffer-dams has been most successful, and that a sea pier of great solidity and durability had been formed in deep water at a comparatively moderate cost. The works of the Albert Harbour were being executed under the superintendence of Mr. John Thomson, as resident engineer, by Messrs. W. & J. York, contractors.

The application of this system to the construction of breakwaters and harbours of refuge, was then noticed; reference being first made to the principal modes of construction hitherto adopted, and to the peculiar phenomena by which such structures were affected.

## THE PALACE OF THE UNIVERSAL AND PERMANENT EXHIBITION OF PARIS.

THE works here have been steadily carried on without interruption. Several portions of the masonry in the outside walls have already reached the height of 35 feet: the rough work of the principal entrance is far advanced: the columns and flooring are being raised; and all the castings are ready to be put in place. We learn from French sources that a busy scene is presented in the workshops, where all the pieces of metal composing this edifice are being prepared. Powerful machines of all sorts, worked by steam, bend, plane, and shape the iron in a hundred different ways, according as the several pieces have been cut to the required form, sheared to the proper lengths, and drilled or punched ready to be put into the work: they are immediately transported to their destination in chariots moving on rails.

The columns are raised by means of pulleys, and the bases rest on cut-stone blocks, into which they are inserted: being hollow they will serve to carry off the rainwater from the roof to the drains. Two hundred columns are already up in their places. When all the columns have been erected, the framing of the roof will be carried on by means of scaffoldings of immense size, which will be moved on tramways by capstans worked by steam power. Two scaffoldings of this description, and of equal size, will start one at each end of the great nave, and will advance till they meet in the centre, where a gigantic dome will be reared.

On the exterior, besides the masonry being, as we have said, in a forward state throughout, the basement is completed; the two corner pavilions are carried up as far as the roof; and the piers of the recesses are, in many places, up to the height of the first floor, the separation here being only indicated by an open-work gallery of iron: the compartments of this gallery, including the grille which is to surround the whole of the exterior of the edifice, are ready. The quantity of iron upon the ground ready to be placed amounts to many thousand tons.

The building, of which we have already given illustrations, will be furnished with, in addition to two principal entrances, eight others of minor dimensions, for the exigencies of the service. Annexes are to be provided, each for some special purpose. In a few days excavations will be commenced for the foundations of one of these supplementary constructions, viz., that for machinery: it will be 492 feet in length, and 115 feet in breadth.

The prolongation of the Chemin de Fer de Ceinture, between the Porte d'Auteuil and the Pont-du-Jour, will pass at the north-western extremity of the Paris Exhibition Building. The cast-iron work for the edifice is supplied by Messrs. T. Edington & Sons, Phœnix Iron Works, Glasgow.

## THE MARRIAGES OF ENGLISH KINGS AND QUEENS SINCE THE CONQUEST.

THE following list, which for greater distinctness is arranged in a tabular form, has considerable interest, and shows that three of our kings and queens died unmarried; that the others formed 13 French alliances, 10 English, 7 German, 3 Spanish, 2 Danish, 1 Portuguese, 1 Flemish, and 1 Scotch:—

*Never Married.*

| | |
|---|---|
| William II. | Edward VI. (died young). |
| Edward V. (died young). | Elizabeth. |

*French Alliances.*

| | | |
|---|---|---|
| Stephen | ....married to | Matilda of Boulogne. |
| Henry II. | ..... ,, | Eleanor of Guienne. |
| Richard I. | ..... ,, | Berenquella of Navarre. |
| John (3rd wife) | ..... ,, | Isabella of Angoulême. |
| Henry III. | ..... ,, | Eleanor of Provence. |
| Edward I. (2nd wife) | ,, | Isabella of France. |
| Richard II. | ..... ,, | Anne of Luxembourg. |
| Ditto | ..... ,, | Isabella of France. |
| Henry IV. | ..... ,, | Mary Bohun. |
| Ditto | ..... ,, | Joanna of Navarre. |
| Henry V. | ..... ,, | Catherine of France. |
| Henry VI. | ..... ,, | Margaret of Anjou. |
| Charles I. | ..... ,, | Henrietta of France. |

*Spanish Alliances.*

| | | |
|---|---|---|
| Edward I. (1st wife) | to | Eleanor of Castile. |
| Henry VIII. (1st wife) | ,, | Catherine of Arragon. |
| Mary I. | ..... ,, | Philip, King of Spain. |

*Portuguese Alliance.*

| | |
|---|---|
| Charles II. | ..... to Catherine of Portugal. |

*Danish Alliances.*

| | | |
|---|---|---|
| James I. | ..... | to Anne of Denmark. |
| Anne | ..... ,, | George, Prince of Denmark. |

*German Alliances.*

| | | |
|---|---|---|
| Edward III. | ..... | to Philippa of Hainault. |
| George I. | ..... ,, | Sophia of Zell. |
| George II. | ..... ,, | Wilhelmina of Anspach. |
| George III. | ..... ,, | Charlotte of Meck Strel. |
| George IV. | ..... ,, | Caroline of Brunswick. |
| William IV. | ..... ,, | Adelaide of Saxe Meiningen. |
| Victoria | ..... ,, | Albert of Saxe Gotha. |

*Flemish Alliance.*

Henry VIII. (4th wife) to Anne of Cleves.

*Scotch Alliance.*

Henry I. ..... to Matilda of Scotland.

*English Alliances.*

| | | |
|---|---|---|
| John (1st wife) | ..... | to Earl Montague's daughter. |
| Edward IV. | ..... ,, | Elizabeth Woodville. |
| Richard III. | ..... ,, | Anne Nevil. |
| Henry VII. | ..... ,, | Elizabeth of York. |
| Henry VIII. | (2nd wife) ,, | Anne Boleyne. |
| Do. | (3rd wife) ,, | Jane Seymour. |
| Do. | (5th wife) ,, | Catherine Howard. |
| Do. | (6th wife) ,, | Catherine Parr. |
| James II. | ..... ,, | Anne Hyde. |
| William III. | ..... ,, | Mary, daughter of James II. |

## THE PROPOSED HULME FREE LIBRARY, MANCHESTER.

THE local Free Libraries Committee have reported that they had considered the plans submitted to them for the branch lending library for Hulme, to be erected on the plot of land in Stretford-road, adjoining the new Town Hall. They recommended that the plans should be approved. The estimated cost would be 5,530*l*. A motion was made in the council last week that the committee be authorised to purchase the land and erect the proposed building, which would be a very handsome structure. A long and desultory debate ensued; the general opinion being against so large an outlay upon one branch library; and an amendment was carried referring the matter back to the committee for information as to the proposed outlay. In course of the debate one of the speakers, Alderman Neill, made the far-fetched observation that the building ought to be a plain one, like a workhouse, to which it was akin, being a charity. On which Councillor Rawson asked whether Mr. Neill felt at all like a pauper when he visited the National Gallery and British Museum reading-room, which were supported by the funds of the State. It was right, he remarked, and desirable that the working classes should assemble in places where some degree of art and skill had been expended; and he denied that they were incapable (as some persons asserted) of receiving therefrom æsthetic and moral influences. It was better to spend 6,000*l*. upon a free library than 20,000*l* upon a gaol, for prevention was cheaper than cure. Another councillor remarked that he thought the privilege of visiting fine institutions would induce in the people a desire to improve their own abodes.

## OPENING OF THE WEST LONDON EXTENSION RAILWAY.

THE West London Extension line of railway to the Victoria Station at Pimlico has been opened for public traffic. This is one of the most valuable connecting lines in the country, and it will also afford a large amount of local accommodation in the districts of Southall, Hanwell, Ealing, Kensington, Chelsea, and Battersea, at each of which a station has been erected. There will be three trains each way on Sundays. In addition to the local traffic there is a direct communication between the North and West of England, and Kensington, Brompton, Hammersmith, Fulham, Chelsea, Battersea, and Westminster, and with all the stations on the London, Chatham, and Dover, and the London, Brighton, and South Coast Railways. The West London line was laughed at for years: it became known as *Punch's* line. The late Professor Hosking was the original engineer. The conductor of this journal acted as the architect and surveyor of the line, and never lost faith in its value and importance. A really good thing lives down laughter and *makes* its worth felt. A recollection occurs to us not altogether *mal-àpropos*. At dinner one day, the late Charles Dance made a joke,—not an unusual thing with him,—but his listener was obtuse. After a time however, Thickhead said, "That's a very good thing, *now I see it*." "Ah! and so it was before," replied Dance.

## CITY IMPROVEMENTS.

ACCORDING to the *City Press*, Messrs. Barclay & Co.'s Bank, Lombard-street, is shortly to be pulled down, to make way for a more modern building; and the firm are now fitting out a temporary banking-house.

The London Dock Company have taken possession of new and extensive warehouses in Lime-street.

Messrs. Spooner's Bank, 27, Gracechurch-street, is to be pulled down; also the adjoining premises, No. 26, and a larger ornamented structure is to be erected on the site.

The Corporation have in contemplation the removal of the houses Nos. 55, 56, 57, and 58, Great Tower-street, in order to widen the carriage way.

On the south side of Allhallows Church, Barking, Great Tower-street, a portion of stone and brick work which formed, it is supposed, a part of the Bell Tower in ancient times, is being removed, and a new porch is in course of construction.

The numerous buildings in course of erection on the site of the ground once occupied by the East India Company are progressing very fast.

A quaint-looking building, No. 2, Mincing-lane, once a blacksmith's shop, is to be pulled down. No. 3 in the same thoroughfare, an old dwelling-house of the early part of the seventeenth century, has been pulled down, and new premises erected by Messrs. Moses & Son, suitable for letting out as offices.

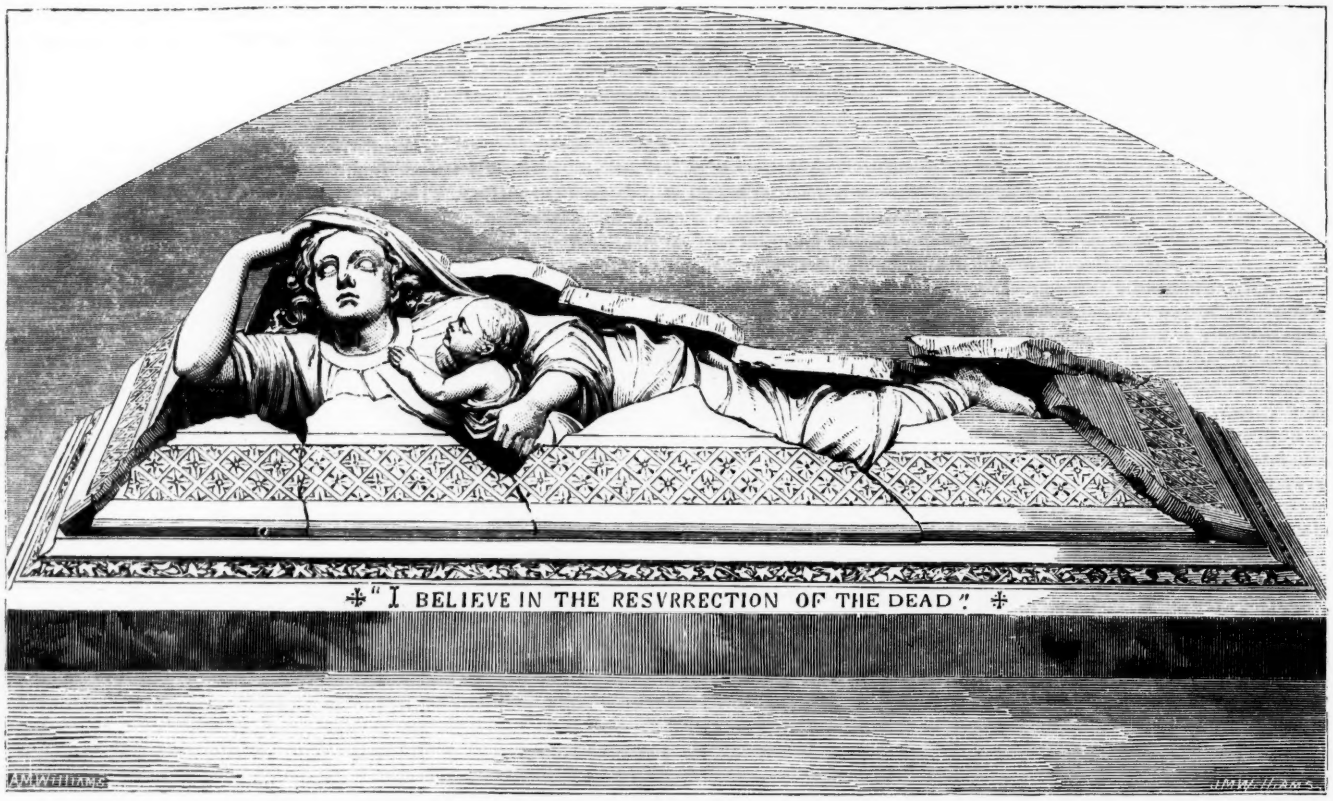
## INTELLIGENCE FROM GUERNSEY.

*Prince Consort Statue.*—The spot on which the statue in memory of Prince Albert is to be erected has been decided on by the States of the Island. In consequence of the island granite not being found sufficiently thick for a pedestal, the committee appointed to conduct the raising of the statue have decided upon making it of English granite. Mr. Durham, the sculptor of the memorial, has informed the committee that he will undertake to procure, for 210*l*., a block of the same material as that used in constructing the Hanois lighthouse,* off the west coast of Guernsey. The tender sent in from the island was for upwards of 380*l*. This decision will disappoint the public, but sufficient reasons are put forth to silence opposition. The Lieutenant-governor, at a meeting of the States, said that Guernsey granite exposed to the air became spotted, and was utterly beneath the character of the work about to be erected. He also remarked that one of his friends had on his grounds some granite in the state alluded to, and upon inquiry he found that the defect could not be removed.

*Beacon.*—A beacon on the Rocque de Braye is about to be erected, the expenses to be borne by the harbours of the St. Sampson and the town.

*Railway.*—A committee named by the States has been formed for the purpose of examining and reporting whether it would be practicable to lay down a railway from the Vale and St. Sampson's Quarries to the Town Harbour, and the committee have had 100*l*. voted to meet the expenses of the survey.

* This lighthouse is now completed, and all masters of vessels agree in stating that the light is a fine one.




MONUMENT TO MRS. LANCE.——MR. J. FORSYTH, SCULPTOR.

## MONUMENT TO MRS. LANCE.

THIS monument is erected to the memory of Mrs. Madelena Louisa Lance, the wife of the Rev. J. E. Lance, rector of Buckland St. Mary. Mrs. Lance died shortly after giving birth to a child: the infant died also, and they were buried together. The church of Buckland St. Mary, in which the monument is placed, was recently built from drawings by Mr. B. Ferrey. The monument is fixed in an ornamented recess within the sacrarium of the chancel, and the recess is backed with a slab of black marble. Upon one of the mouldings is inscribed, "I believe in the resurrection of the dead." The monument is executed in Caen stone by Mr. J. Forsyth, of London.

## THE PROTECTION OF BUILDINGS FROM LIGHTNING.

THE following remarks are taken from a communication in the *Scotsman* newspaper on this subject:—

Pieces of glass were attached to the more prominent points of Christ Church, Doncaster, in consequence of an idea, which is too prevalent, that their non-conducting properties would *divert* the lightning. A single flash laid the costly structure in ruins. On the other hand, buildings have suffered severely even when a conductor was used. One of the causes is, that in many cases comparatively thin *wires* are used instead of very thick ones or *rods*. If a conductor is not sufficiently thick, it will be fused, just as a thin wire will be fused by a voltaic current which cannot sensibly raise the temperature of a thick one. We have had many opportunities of observing this result; and in every case serious consequences would have probably followed had not different channels of escape presented themselves. Lounging one day at a railway station, a flash from a cloud in close proximity struck a thick wire, passed into the station, and set fire to it. On examination, we found that the only connexion with the ground was a thin wire, which had been melted. The fluid had therefore been dissipated throughout the room in its efforts to escape.

Another frequent cause of injury results from the fact that a conductor, made even on the most approved principles, is often regarded as affording absolute protection in *itself*. Apart even from the proof afforded by experience, a little attention to the phenomena of the thunder-storm would prove the fallaciousness of the idea. The spire of a church may be protected by a rod; but if, as is frequently the case, there are subordinate prominent points on the building, surmounted by gilt ornaments, not in metallic connexion with the ground; and here and there detached pieces of lead or of zinc; *absolute* protection will not be afforded, from the simple fact that a flash not unfrequently "bifurcates," or divides into two portions—one striking the rod, and the other striking some detached object. If the detached object is not in metallic connexion with the earth, it will probably be rent or displaced; and if the flash meets with obstructions in the shape of other non-conductors, it will commit the havoc which we so frequently hear of.

One writer has shown that the Temple of Solomon was lightning-proof, from the manner in which the metal employed externally was disposed. In the same way, most of our buildings are unintentionally provided with a kind of protector in the shape of the lead or the zinc sheathing and the metallic gutters on the roofs, connected with the rain-pipes, which terminate in the cesspools and drains. Why are those materials not always employed in conjunction with the conductor? Under certain conditions, they offer facilities for the escape of the fluid, which, if taken full advantage of, would in some cases greatly lessen the risk of danger; in most, render edifices lightning-proof. So far as houses are concerned, the desired object may be attained by simple means. Care should be taken that the whole sheathing on the roofs should be *metallically* united by nailing the different portions at their points of contact; and every *detached* piece of metal should be brought into connexion by means of a broad strap of copper, of lead, or of zinc. The whole should then be *metallically* united with the gutters which lead into the rain-pipe. Should a flash strike *any portion* of the sheathing, it will thus find a free passage into the ground, provided always that the rain-pipe is a metal one. The lightning-rod should be fixed to the sheathing at a distance of about 2 feet from the chimney-pots. Carbon is one of the best of non-metallic conductors; hence the reason why the soot of chimneys offers peculiar facilities for the passage of the fluid, and thus endangers both life and property.

The remarks which we have made in reference to the sheathing of houses are also applicable to lofty public buildings. In addition to their connexion with the rain-pipe, the sheathing and gutters should be united to the lightning-rod by two or three thick wires. Gilt ornaments and vanes surmounting isolated subordinate turrets, &c., should also be metallically united with the rod and the rain-pipe. In every case, indeed, the simple principle should be adhered to of making all the metal employed externally, whether usefully or ornamentally, practically *one conducting body* in good connexion with the ground. Twisted strands of copper, or of galvanized iron wire, are well adapted, on account of their flexibility, to the establishment of connexion between isolated portions of a building, and they may be easily disposed so as to prevent the marring of architectural features. Where rods are used, the risk of "bifurcation" will be greatly lessened by splitting them for a foot or so from the top, or by attaching two or three spikes obliquely, so as to present several points of attraction. Should danger be apprehended from a *lateral* stroke, we would suggest that spires and elevated monuments be girt *spirally* with a twisted copper or galvanized iron wire-rope—say of seven strands at least—protruding spikes being placed at an interval of every 2 or 3 feet. We are not aware whether any arrangement of this kind has been proposed hitherto; but we feel assured that, were it carried out, it would form a highly efficient conductor;—more efficient, perhaps, in some respects, than any which we have seen.

Experience has shown that wherever a system of protection based on sound principles has been adopted, no injury has resulted. But experience has also shown that where there is no system, or where only a partial one has been resorted to, the destruction of the most stately edifices may be the work of a moment.

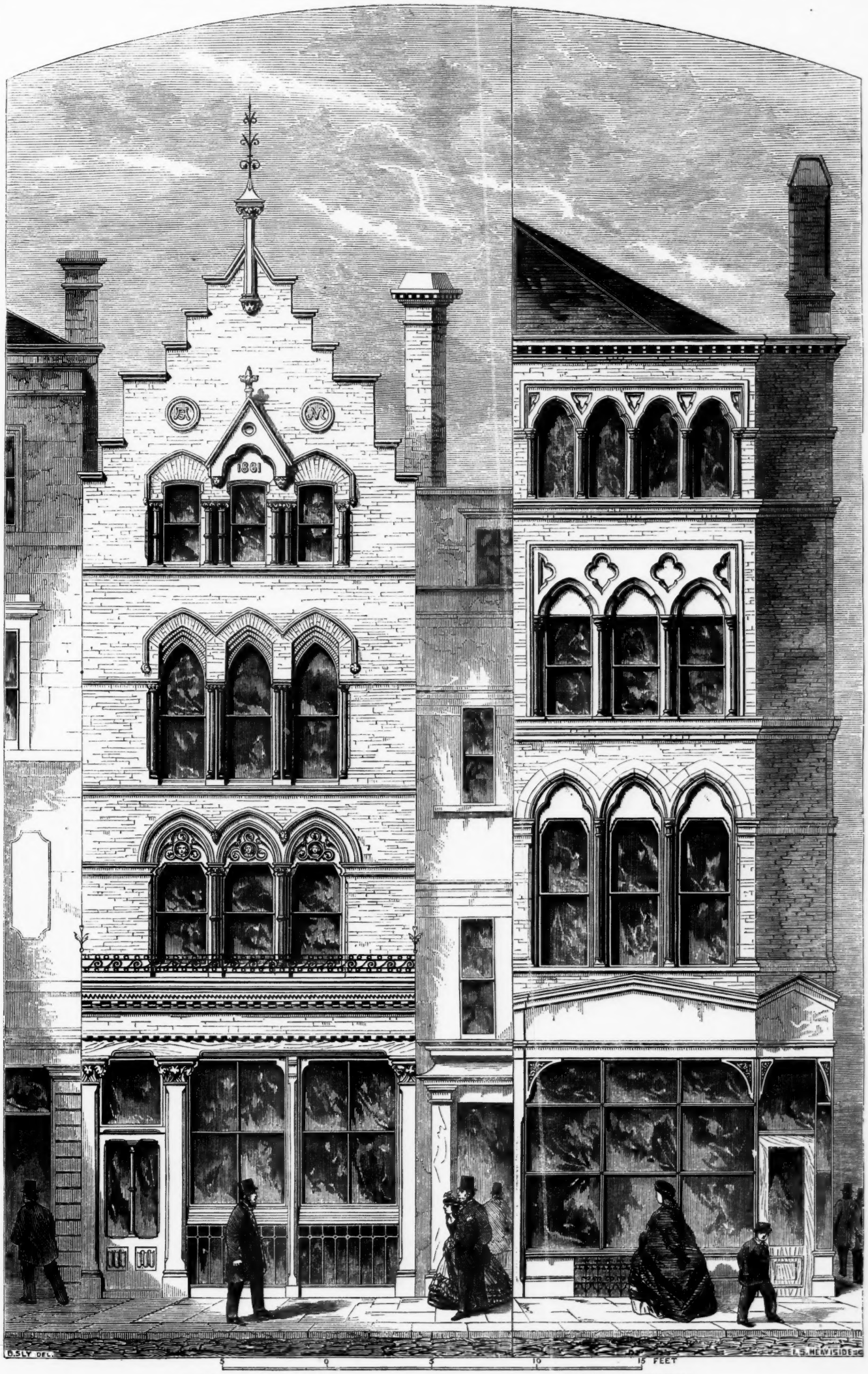
## MODERN STREET ARCHITECTURE: LONDON.

RECORDING the varying architectural street fronts which are rising in all quarters of the town, we have engraved two houses erected from the designs of Mr. T. Hayter Lewis.

The house in *Cheapside* was built for Mr. H. A. Soames, according to the special requirements of the tenant (a silversmith). The cost was 1,313*l.*, the amount of contract, including stoves, &c. The builders were Messrs. Asford, of Coleman-street. The materials are white brick and stone. The design originally comprised an attic story in a high-pitched roof; but this was abandoned on account of the expense. In the foundations several old walls of rough chalk, &c., were found, following the present wall lines, but no Roman remains.

81, *Old Broad-street*.—This was built for Mr. J. Remington Mills, M.P., and Mr. A. Scrutton. The mouldings are partly in brick, but chiefly in stone. The total cost, including stoves, &c., was 1,002*l.* The builders were Messrs. Ashby & Horner, of Aldgate. The house is built entirely for chambers, as much light being given as possible. Several traces were met with (at a depth of 13 feet from the street) of an old Roman building on the site.

LONDON STREET ARCHITECTURE.—Mr. T. Hayter Lewis, Architect.




81, OLD BROAD STREET. HOUSE IN CHEAPSIDE.

## THE FEMALE SCHOOL OF ART.

THE students submitted this March 105 drawings in competition; and the Government inspector awarded the full number of medals,—thirty. Of these medalled drawings, fifteen were selected to be sent in competition with the other schools of art throughout the United Kingdom for national medallions. It is evident, therefore, that the school is holding its own. Some of the drawings showed considerable ability, especially those by Miss S. McGregor. Amongst the works, those which more particularly attracted our notice were by Miss S. Blake, Miss C. Phillott, Miss F. Seddon, Miss J. Fox Smith, and Miss E. Snellgrove. Miss E. Childe had a medal for a drawing on wood from nature. We are forced to say we desiderate a more vigorous description of art than at present exhibits itself in Queen-square. Flowers are all very well in their way, we delight in them: but from a world all flowers, deliver us!

## FOUNTAINS, KENSINGTON GARDENS.

WHEN care is shown in the endeavour to improve public places, and particularly when emendation is effected where neglect had formerly been but too palpable, it is hard to find fault with works of innovation; nevertheless, in respect to the new realization of an object of great interest in so popular and valuable a place of summer promenade, a hint may not be amiss.

For the large expenditure of Woods and Forests funds, and the good intentions of the Commissioner, all credit is allowed; still every one viewing the reservoirs first designed for filtering-beds, but now converted into squirt-basins, feels disappointed at the result, as well as at the want of finish in the marginal precincts, which are rude and shapeless as heretofore.

The large tazza fountain, with side figures, has certainly a good effect, as also that in the centre of the filter-beds; but the four slender squirts in these latter basins are ridiculed by all, especially by those who have seen Versailles and other foreign water-works. That it would materially improve and embellish the *ensemble* if these basins were *filled up and planted with flowers*, is the general opinion.

After all the expenditure of time and money upon the wells and mechanism, all that has been acquired to freshen the stagnant lake is the flow of 160 gallons per minute, *so long as one engine is in action*. The second engine is applied to the raising and circulation of the water in the Serpentine; and thus, by aëration and refluxion, most certainly a great improvement is effected.

After all the work of laying massive pipes at a sinking gradient along the whole margin of the lake, to take the water back to the engines, for filtration, these pipes and these beds are useless; so, to redeem the mistake, the four squirts were placed there. Better enlarge the central jet, and extend by 10 or 12 feet its basin, which at present scatters spray on the adjacent walk!

Much care and skill are lavished upon one portion of the Park borders,—that bordering Park-lane. Would not a little of the same taste and skill be applied appropriately in and around the favourite and beautiful dell of the fountains? We have but this solitary example of a public fountain in a really charming and suitable position,—the only one, too, within reach of hundreds of thousands who rarely migrate farther. That example ought to be respectable, if not altogether incomparable; but the basin of the central fountain should be not only enlarged, but lowered in its margin, which actually conceals the spreading lotus leaves and lower falls! Then the vicinal borders ought to be laid out in beds of shrubs and rich flowers. This properly done, the effect in that forest nook would be indeed beautiful and solacing.

It is true that some trees have perished there, the roots having been cut in laying the futile pipes; still, there are trees enough: indeed, as before observed in the *Builder*, throughout the whole extent of the gardens, where one-half of the trees are deformed, and many dying off through too close propinquity, a number of them ought to be cut away, to allow the remainder a chance of surviving, and throwing out lateral branches. At present one full fourth part are little better than bare poles.

The value of this incomparable suburban park to all classes of oppidans is inestimable; therefore no outlay can be thrown away which might render it a source of health and enjoyment to the million. What has been accomplished towards obtaining a supply of fresh spring water, to redeem the disgusting and sickening state of the green and yellow melancholy lagune mis-called the Serpentine, has been done by Mr. Docwra, the contractor; and had he been allowed to carry out his views, when he sank 317 feet for the London basin spring, he could as easily produce 500 gallons per minute to create a perpetual cascade, at the tail of the lake, and over the present dry, rusticated falls; and there is one advantage in this fresh supply, that the element is of the clearest, softest, and purest.

It may be observed respecting the wells and mechanism formed by Messrs. Easton & Amos at Duck Island, St. James's Park, that some further works are meditated or are now in action there: the source of supply is, however, owing to the ooze of the Thames and the sluggish sewers of that level, far inferior in quality to that of Paddington (Spring-street) locality. The circulation and aëration of the same body of water may correct much of the fœtor and miasmata of a standing pool; but the infusion of pure, fresh "*de profundis*" is a more reliable source, besides that the numerous swimmers and bathers must acquire more vigour from immersion, whilst boating amateurs and nautical neophites would experience a more refreshing and invigorating exercise from their pastime.

QUONDAM.

## VARIORUM.

### RARE WORKS ON ARCHITECTURAL SUBJECTS.

A PUNNING correspondent sends us the following catalogue of very odd volumes. They are, he says, uniform with Hood's list:—

*Angell*, On the Wings of Villas.
*Ashpitel*, On Stoke-holes.
*Armstead's* Handbook of Architecture.
*Burnet's* Effectual Cure of Smoky Chimneys.
*Bell's* Application of the Telegraph to Domestic Use.
*Baker*, On the Arrangement of Ovens.
*Burn*, On Fire-proof Construction.
*Christian*, On Churches.
*Coxe's* Antiquities of Enfield.
*Deane's* English Cathedrals.
*Driver*, On the Steam-Engine.
*Eyre*, On Ventilation.
*Ferrey*, On Bridges.
*Fergusson*, On Lodgings.
*Fowler's* Columbary.
*Giles*, On Rural Retreats.
*Goldie*, On the Abuse of Gilding.
*Hall*, On Pulleys.
*Knowles*, On Works in Theatres.
*Kerr*, On the Construction of Kennels. Also a new Tale.
*Lamb*, On Slaughter-Houses.
*Lewis*, On Weights.
*Lightly*, On the Principles of Modern Construction.
*Mair's* Stables.
*Newall's* Law of Dilapidations.
*Nelson's* Bird's-eye View of Trafalgar-square.
*Mayhew*, On Quarrying and the Qualities of Stone. Revised by Whewell.
*Oliver*, On Rolandsec.
*Parker*, On Landscape Gardening.
*Pugin's* History of St. Augustine.
*Pearson's* Artesian Wells.
*Penfold*, On Cattle Markets.
*Porter*, On Biers.
*Richardson*, On the Shows of the Ancients.
*Rickman*, On Farm Buildings.
*Shout*, On Sound in Rooms.
*Self-Culture*, by I. Reid.
*Scott*, On Everything.
*Street's* London and its Suburbs.
*Slater*, On Iron Roofs of Recent Construction.
*Smith*, On Mediæval Metal Work.
*Smirke*, On the Laughing Gas.
*Tarring*, On Fences.
*Taylor's* Account of Cleopatra's Needle.
*Turner's* Round Towers of Ireland.
*Turnbull's* Dairy Homesteads.
*Tite*, On the British Costume.
*White's* Polychromy.
*Weale's* Revolutions in Art.

## SANITARY STATE OF HOLMFIRTH.

MANY deaths have lately occurred at Holmfirth from scarlet fever, arising from the sanitary deficiencies which exist in that town and neighbourhood. The Medical Department of the Privy Council recently had their attention directed to the subject, and they sent a medical inspector down to investigate the circumstances of the increase in the mortality, and he has made a report, in which he describes the shocking state of filth in which many parts of the village are literally steeped. Notwithstanding an abundance of water, too, which the hills are capable of supplying, the inhabitants are badly off for water supply; and as for drainage there seems to be little or none, and scarcely any cesspools. In consequence of the inspector's report, the Medical Department of the Privy Council have addressed the usual letter, by their secretary, to the Huddersfield Board of Guardians, as to the bad condition of the registration district, and the local administration of the Nuisance Removal Acts, which is in the highest degree unsatisfactory. Their lordships also express their desire to know whether there is any reason why the village of Holmfirth should not be provided with such a system of house-drainage and water-service as would enable the inhabitants to substitute properly constructed water-closets for their present undrained and most offensive privies. The Board of Guardians have thus been forced into action, and it is to be hoped something effectual will speedily be done, especially as the summer is nigh.

## ARCHITECTS' COMMISSIONS FROM TRADESMEN.

A CORRESPONDENT, dating from Manchester, and signing "One who will not fee," asserts that several of the architects there give builders to understand that as a matter of course they expect to receive a commission on all the work done under them, whether by contract or by private arrangement. Further, that he fears the system is on the increase. We must have something more than general assertion before we can believe so injurious an assertion as this.

The writer says, "The evil is baneful in its results; destroying the independence of a class who, above all men, ought to be above being bought; and often, as a natural consequence, leading to the sacrifice of the interest of the proprietor."

Our readers do not require to be told our own opinion on the subject; but we must have proofs before we can admit the truth of the accusation.

## SCHOOL-BUILDING NEWS.

*Halifax.*—New schools for St. Thomas's Church district, and a schoolmaster's house, will, in all probability, be erected during the summer months, as plans for the buildings have been prepared, and the committee intrusted with the matter are taking steps for obtaining contracts. The cost of the erection is expected to be about 1,400*l.* Towards this amount about 450*l.* have been subscribed, and 450*l.* promised in grants. The site, valued at 300*l.*, has been given.

## PROVINCIAL NEWS.

*Melton Mowbray.*—The guardians of the Melton Mowbray Union having determined upon building a new house for the master and mistress in connexion with the present workhouse, plans were prepared by Mr. R. W. Johnson, and these having received the sanction of the Poor-law Board, will be carried out during the ensuing summer.

*St. Neots.*—The new Corn Exchange building is approaching completion. It is expected that the structure will be completed by May. Mr. Wildman is the builder; and Mr. Bellamy, of Lincoln, the architect.

*Oxford.*—The new Corn Exchange at Oxford, which has been erected at the cost of the town council, was to be opened on Wednesday with a grand banquet. The works have been ably carried out by Mr. Dover, of Oxford, builder, from the designs furnished by Mr. S. L. Seckham, architect and surveyor to the city of Oxford.

*Chatham.*—The Marquis of Hartington, one of the Lords of the Admiralty, has been inspecting the works in progress on St. Mary's Island in connexion with the extension of the dockyard. His lordship, who was accompanied by Colonel Godfrey Thomas Green, director of engineering and architectural works, was conducted over the island by Mr. Bernays, civil engineer, under whose superintendence the works are being carried out. He then proceeded to the Royal Marine Barracks, and was shown over the additional barrack-rooms which are now being erected by Messrs. Foord & Sons, of Rochester, the Government contractors. The first block of buildings, which will accommodate between 200 and 300 men, are now completely roofed in, and will probably be ready for occupation by the end of the summer.

*Maidstone.*—The Town-hall, which for so many years has needed repair, has at last been renovated and decorated. The substantial repairs,

the painting and the graining, have been executed by Mr. L. Ashdown, of Stone-street. The artistic decoration is in the Cinque-cento taste. The ceiling is decorated with bright lines, foliages, and medallions, the stucco work being slightly heightened by gilding. The walls are divided into panels by borders, from the tops of which hang trophies in allusion to arts and arms, and the natural products of the earth,—as birds, beasts, corn, fruits, flowers, &c., among one of the most conspicuous of which is the source of the wealth of the neighbourhood—the hop. The borders have small medallions containing heads, and in the cove of the ceiling are others of larger size, containing those groups of boys at play which the Italians call "puttini." The decoration has been executed under the direction of Mr. Arthur Ashpitel, by Signor Francesco Galli and Signor Cotti, of Edgeware-road. On the frieze over the windows and panels, in small letters are written a few of the names of those natives of Kent who have distinguished themselves by learning and science, or in arts, arms, jurisprudence, or philosophy. This practice, as the *Maidstone Journal* remarks, is not unusual abroad, particularly in France, as, for instance, at the Bibliothèque, near the Pantheon, at Paris (illustrated in our pages), on the frieze of which the names of their great men are placed.

*Sheerness.*—A new building has been erected by Government, at a cost of upwards of 3,000*l.*, for the accommodation of the troops in garrison. It consists of a day-room and reading-room, situate one over the other, each measuring 80 feet long, 23 feet broad, and 12 feet high. Adjoining the reading-room are a library and coffee-room, as also quarters for the librarian. The site of the building is at right angles with the eastern extremity of the soldiers' new barracks. The opening is expected to take place next month, when amateur theatrical performances and a series of concerts will be given. The erection of the building was executed under contract by Mr. G. Naylar, of Rochester.

*Brighton.*—The works committee of the local council have received a letter on behalf of Miss Clark, for permission to erect a drinking-fountain opposite the Bristol Hotel. The committee have resolved that permission be given to Miss Clark to erect a drinking fountain, of the design submitted, on the south side of the Marine-parade, in front of the steps leading to the beach opposite the Bristol Hotel, on condition that the sum of 100*l.* sterling be invested by Miss Clark, in 3 per Cent. Consols, as the council should direct, as a fund for the permanent supply of water for, and the painting and repairing of, such fountain. The council have confirmed this.——A letter was received by the council from Mr. E. Birch, on behalf of Mr. G. W. Simpson, with a tracing, showing the plan, elevation, and section of a proposed pier, opposite the west end of Brighton, and its contemplated junction with the Esplanade, for the sanction and approval of the council. Upon this the works committee recommended the council to consent so far as it lawfully can to the erection of the proposed pier opposite Regency-square, as shown by the plans and sections submitted, the works to be done under the supervision of the surveyor. Some 15,000*l.* or 20,000*l.* are to be expended on a structure in front of the west cliff. The committee's recommendation was confirmed.

*Coventry.*—From an authentic return just made of the number of empty houses, business premises, shops, public-houses, &c., in Coventry, it appears that there are vacant in this city, at the present moment, no less than 25 public-houses, 108 business premises, 681 front dwelling-houses, and 515 houses in courts, making a grand total of 1,329 houses and premises out of use. Emigration is actively going on.

*Bradford.*—A special meeting of the proprietors of St. George's Hall was held on Tuesday, to consider a recommendation of the directors for the enlargement of the present saloon of the hall. Mr. Lockwood, architect, laid before the meeting plans, showing how the room might be enlarged. He said it was proposed to take in the small anterooms at the ends of the saloon, by doing which they would obtain a room 76 feet in length, and to move forward the front of the patrons' gallery in the large hall, in order to increase the width of the room. By these alterations a room would be got which would accommodate 600 people, exclusive of the orchestra. Mr. Lockwood explained another alteration which it was proposed to make, for the purpose of improving the approach to the great west gallery of the large hall. The expense of these alterations, he said, would not exceed 1,200*l.* After a very long discussion, it was resolved, "That the directors be now empowered to make the alterations in the enlargement of the present saloon as suggested by the architects in the plans presented to the meeting, and that they be authorized to borrow the money for that purpose."

## CHURCH-BUILDING NEWS.

*Clifton* (*Beds*).—The parish church of All Saints', Clifton, which is supposed to have belonged, as did the manor, to the Knights of St. John of Jerusalem, has been restored and enlarged at the expense of the present patron, Mr. Miles. The church consisted of a western tower, a broad nave, and north aisle; south porch, chancel, and chancel aisle; and possessed many interesting features, which have been carefully preserved and brought to light. The walls, piers, moulding, &c., have been denuded of whitewash, with which they were disfigured. Pews and galleries also abounded, but have entirely disappeared. Additional church-room having become necessary, it was decided to rebuild and enlarge the north aisle and chancel aisle, both of extremely late date, in preference to disturbing the south wall, which contains several good decorated windows, &c. The style of the new work is Geometrical. A "low side window" was discovered at the south-west angle of the chancel. The east window is of five lights. There are sedilia, and a double piscina; an alabaster tomb, with recumbent figures of Sir Michael Fisher and wife, who died in 1549; and remains of a rood-loft, of Perpendicular date, in the shape of sixteen panels, having painted full-length figures of the Apostles and Saints, which formed part of a gallery front, will be preserved in the church. Of the old font nothing was left but the thirteenth century bowl, which has been provided with a new base and cover. The roofs are entirely new, and covered with Staffordshire tile. Coloured marbles are used in the pulpit, and low stone screen between chancel and nave. The seats are open and uniform, and the stalls, lectern, and chancel fittings generally are of Baltic oak. Three of the windows have been filled with glass by Hardman. The rest are glazed with thick green glass in two colours. The chancel is paved with Minton's tiles. Bath stone has been used for the dressings, &c., and sandstone from the neighbourhood for the new walling. The works have been carried out under the direction of Mr. Haycock, jun., of Shrewsbury, architect, by Mr. Geo. Jeeves, and Messrs. Warren, of Hitchin, and Mr. Davies, of Ailsey. Mr. Dodwell, of Shrewsbury, supplied the hot-air apparatus; and the lighting is by Skidmore.

*Billesdon* (*Leicestershire*).—The roof, south wall, and chancel arch of the church being in a state of great danger and decay, the latter temporarily propped up with a wooden buttress, to permit the church being used for divine service, increased accommodation is absolutely needful. The estimate for the whole (including the rebuilding of the tower and spire, which has been completed at a cost of 740*l.*) is 1,940*l.*; of which 600*l.* have been subscribed by the inhabitants and landowners of Billesdon, and 400*l.* through friends, and two grants from the Church-building Societies of 80*l.* and 30*l.* each. A bazaar has also been held in order to forward the object in view.

*Bray* (*Maidenhead*).—The committee appointed with the view of carrying out the works connected with the restoration of the parish church have recently published a statement of the accounts, from which it appears that, including works contributed by the churchwardens, a total of 5,073*l.* 4s. 3d. has been expended on the restoration. In addition to these works the following stained windows, according to the *Windsor Express*, have been placed in the church:—East chancel window by Wailes, and west nave window by Lavers & Barraud, the gift of Mr. J. Hibbert; window at west end of north aisle, by O'Connor, the gift of Mr. J. J. Coney; window at west end of south aisle by Hughes, the gift of the relatives of the late Rev. Walter Levett; three windows in south chancel aisle, by Lavers & Barraud, the gift of Mr. E. H. Palmer; single window westward of the tower in south aisle, by Lavers & Barraud, the gift of Mrs. Palmer; three windows in north chancel aisle, all executed by Lavers & Barraud, viz., large east window, given by Mr. C. P. Grenfell, M.P.; window eastward of organ, by Riversdale, Mr. W. Grenfell; window westward of organ, by Miss Grenfell, of Ray Lodge, Mrs. Paget, and Miss Grenfell, of Taplow Court.

*Woolstan* (*Southampton*).—The new church on the banks of the Southampton water is assuming shape, according to the local *Advertiser*. The exterior presents a nave, with transept and chancel. Over a low north aisle rises a clerestory, and a simple porch groups beside the base of the unfinished tower. The exterior is built of Swanage stone, with windows, gable copings, and other dressings of Corsham Down. A series of arches on the south side, temporarily filled in, shows the possibility of subsequent extension. The facing of the walls and arches is of bricks of several tints, arranged in regular order, in a variety of patterns and bands, according to their several positions. The windows are of varied tracery, and the pillars and capitals are of Bath and of Tisbury stone. The capitals are roughed out ready for carving. On either side of the chancel the arches which separate this from the narrow chancel aisle are carried by a single shaft of polished Devonshire marble. The architect is Mr. W. White, of London; and the builder is Mr. Bull, of Southampton. Funds are still wanted to help the completion of the building.

*Wolverhampton.*—The foundation-stone of the new Baptist Chapel, which is to be erected in the Waterloo-road, near its junction with Darlington-street, has been laid. Inclusive of the price of the land, the total cost of the new erection will be 3,000*l.* Of this sum upwards of 1,000*l.* have already been promised or subscribed. The new chapel will be a parallelogram, 70 feet by 44 feet, and will include entrance lobby, staircase, wings, and recess for the baptistery. The building will be erected on ground considerably below the roadway level, and facilities will be thus afforded for the conversion of the available space immediately beneath the floor of the chapel into a large school-room, to which access will be easy from the road, on a lower level at the rear. Internally the building is arranged with two side aisles and an eastern gallery, with provision for future side galleries. Externally the eastern front is to consist of a gable, having a central entrance, with small lights on each side into the lobbies, and a grouped triple light window in the gallery. The north wing will be semicircular, and at the south wing rises a tower of the height of 70 feet. At the rear of the chapel there will be a minister's vestry and lecture-room. The building is calculated to accommodate 650 persons. The architect is Mr. Bidlake, and the builder Mr. Burkitt, both of Wolverhampton.

*Far Headingley* (*Yorkshire*).—Mr. Edmund Denison, of Doncaster, formerly M.P. for the West Riding, and his eldest son, Mr. E. B. Denison, Q.C., have signified to the vicar of Leeds their intention to build and endow, with an income of 200*l.* a year, the church of Far Headingley, for which a subscription was begun last year; Sir Thomas Beckett, bart., granting the site.

*Oxford.*—A window has been placed in the south aisle of St. Mary Magdalene church, in memory of the late Bishop of Antigua, Dr. Rigaud, and two of his sisters, by surviving members of their family. The subjects are Faith, Hope, and Charity, with angels in the upper lights holding scrolls, on which are three of the beatitudes, "Blessed are the Merciful," "Blessed are the Pure in Heart," and "Blessed are the Peacemakers." The artist is Mr. Bell, of Bristol.

## SCENERY AND THE STAGE.

*The Haymarket.*—The panorama illustrating the tour of the Prince of Wales in the East, introduced to the public by Mr. Buckstone on Easter Monday, has been some time in preparation. Our readers may remember that Mr. William Telbin, who, with his son, undertook a journey through Turkey, Syria, the Holy Land, and part of Egypt, to make sketches for the purpose, was stricken with fever, and thus the work was delayed. On the occasion of the Prince's marriage, and made to terminate with a view, painted by Mr. Grieve, of St. George's Chapel, Windsor, during the celebration of it, the panorama, nevertheless is equally *àpropos*, and, indeed, is of that character that it could never be out of place. It comprises Cairo, Philæ (the water admirably managed), Jerusalem, the Jordan, the Dead Sea (a picture of desolation), Nazareth, the Sea of Galilee (a beautiful work), Mount Hermon (?), the Interior of a Turk's House in Damascus, lighted up; Baalbec, Beyrout, and Constantinople. This beautiful set of pictures ought to draw thousands. It would doubtless pay to show it by and by, in the morning, at a shilling, for the advantage of a large public who do not care for the theatre, or dislike late hours.

The dramatic sketch which precedes the panorama, "Buckstone at Home," by Mr. Stirling Coyne, is exceedingly well written, and introduces cleverly many of the favourites, together with a

new candidate for Haymarket favour, Miss Winter, who as *Italian Opera* sings a *scena* with great success. "Much Ado about Nothing" has been played to introduce Miss Louisa Angel, a young actress from Newcastle, in the difficult part of *Beatrice*, which was presented sufficiently well to show that the lady is likely to be a valuable acquisition. Mr. Walter Gordon, heretofore at the Olympic, and who has the advantage of being a gentleman, acted *Claudio* with skill and intelligence. Mr. Howe is an excellent *Benedick*; Mr. Farren very good as *Don Pedro;* and Mr. Compton a born *Dogberry*, the immortal type of an ever-present family.

*The Princess's.*—The Extravaganza here is very amusing and very well played,—Miss Oliver, Miss Murray, Miss Howard, Miss Hudspeth, Mr. Belmore, and Mr. C. Seyton, sustaining the principal parts. It is called "Beautiful Haidee," and is compounded by its author, Mr. H. J. Byron, from "Don Juan," "Lurline," and "Lord Bateman," an odd mixture enough. Mr. F. Lloyds, who is rapidly taking a high place in his profession, has painted some remarkably good scenery for it;—the shore of a Grecian island after a storm, with rolling sea; the Mermaid's Haunt; and the Floral Hall of the Caryatides. The second of these is especially clever. Lord Bateman is seen in the water, under the wrecked vessel; and this, gradually rising, terminates in the mermaid's haunt, a fairy scene of great beauty. Some pretty dancing completes the success.

*Another New Theatre.*—Another new theatre is talked of, in the neighbourhood of Chancery-lane. It is to be of iron, it is stated; and great care is to be taken to provide for the comfort of the visitors. If this point were considered, before it be too late, by managers of existing houses, it would be advantageous. A four hours' confinement in some of our theatres is simply insupportable. Try the upper boxes at the St. James's Theatre, for example; and if you have long legs you will vow never to do it again. The box-keepers here, by the way, are most importunate. Surely 3s. a-piece is enough for the horrible confinement, without being *forced* to hand over another sixpence or shilling to be allowed to get into a seat.

## THE THAMES EMBANKMENT.

In a report to the Metropolitan Board of Works, Mr. Bazalgette says,—

"The total length of the embankment is about 7,000 feet, but it is completely divided by the bridges into three sections, each of which will be viewed by itself, and the line of vision will not ordinarily be continued from one section to the other. The first section is from Westminster to Hungerford Bridge, the second from Hungerford Bridge to Waterloo, and the third from Waterloo to Blackfriars Bridge.

A continuous line of embankment wall would not in itself be productive of much architectural effect: the present landing-places for steamboats are exceedingly ugly, and there would be much difficulty in connecting the river wall with the existing bridges, so as to produce an effective and consistent design.

At each of the bridges there are, and must be, landing-places for steamers; and midway between the bridges there are landing-places of some description, which will have to be maintained.

To meet these requirements it is proposed to treat each length of embankment from bridge to bridge as a complete design, and to make the steamboat-piers and landing-places prominent and effective, as well as useful and necessary features.

At Westminster Bridge, the roadway, which rises at an inclination of 1 in 80 to the level of the bridge, is set back some 30 or 40 feet from the face of the embankment wall; and the intervening space would be preserved as a promenade and steamboat-pier, having access from the bridge by a wide and imposing flight of steps opposite the Houses of Parliament. This will terminate without abruptness the varying styles of architecture at this point. Between Westminster and Hungerford Bridges would be landing-stairs for smaller craft; and here it is proposed to introduce the beautiful water-gate now situate at the end of Buckingham-street, and erected after a design by Inigo Jones. On either side of Hungerford and Waterloo Bridges would be steamboat landing-piers, the dummies for which would be partly concealed within recesses formed by projecting into the river, in front of the general line of embankment, massive granite piers with moulded pedestals rising about 30 feet above the roadway, and hereafter to be enriched with bas-reliefs and surmounted by groups of statuary.

Half way between Hungerford and Waterloo bridges it is proposed to construct a flight of landing steps 60 feet wide, projecting into the river, and flanked at each end with massive piers, rising to the level of a few feet above the roadway, and hereafter to be surmounted with colossal figures of river deities, or other appropriate groups. It is proposed to form an approach for foot passengers from the high level roadway to the river by a second flight of steps, descending to the level of the lower or embankment roadway, which would add much to the effect of this central feature as viewed from the river. On either side of this approach a line of shops could be erected on the land side of the embankment roadway, the backs of which would form a retaining wall to the ornamental crescent and promenade above them.

Between Waterloo and Blackfriars bridges, and in front of Arundel-street, a steamboat pier would be constructed, in lieu of the present Essex-street pier, designed upon the same principle as those adjoining the bridges.

The embankment wall itself has been enriched with mouldings of a simple character down to the level of high-water mark, the continuous line of moulding being broken by the introduction, at intervals, of massive blocks of granite to carry ornamental lamps, and by occasional recesses for promenade seats.

It is proposed in the first instance to construct the embankment wall and fill in behind it to the level of 4 feet above Trinity high-water mark, and afterwards to arrange for the laying out of the area reclaimed. I propose to divide the work into two contracts, the first, from Westminster to Waterloo Bridge, which may be let about the end of May or early in June; and the second, from Waterloo to Blackfriars Bridge, which may be let before August next."

The number of houses required to be taken for the construction of the Thames Embankment on the north side of the river, situate in Printer's-street, Huish-court, Currier-row, Jackson's, Canterbury, and Green Dragon courts, in St. Anne's, Blackfriars, amounts to thirty-two, consisting of tenements containing from three to eight rooms, and the number of persons to be displaced thereby 437, children included. The number of houses to be taken for the construction of the Southern Embankment in High-street, Vauxhall, Princes-street, Upper and Lower streets, and Stangate, in Lambeth, is 124, including seven model lodging-houses, and calculated to displace 1,175 persons, including children.

## WIDE TENDERING AND BILLS OF QUANTITIES.

Sir,—Not unfrequently we see tenders for works varying in amounts, and, in some instances, specially noted by you. I take the liberty of annexing extracts from bill of quantities which I received during the past week;—the greater part of the quantities being but received by the morning's post of the day on which the tenders were to be delivered.

The quantities in question were furnished by the architect, assisted by a gentleman appointed by the architect. This latter gentleman was assumed to represent the contractors, but the contractors were never consulted or allowed to vote on the subject. A commission of 2½ per cent. is modestly charged by these gentlemen for the quantities, in addition to lithography expenses, and this commission is also charged on "*provided sums*," which amounts to one-sixth of the entire cost of the works.

To the outside public it is inexplicable how such large differences do arise; but I think you will agree with me that it is more a cause of wonder that greater differences do not arise under such circumstances as above narrated.

I am well aware that such a course is not in practice in London; but I am anxious that you should know how some gentlemen manage things in a large provincial town, and which boasts itself the metropolis of the Midland Counties.

A Provincial Contractor.

*** To show the insufficient and improper manner in which the quantities are prepared, it will be sufficient if we give two of the extracts sent:—

"No. 1 staircase, from 1st to 2nd floor, 3 ft. wide 13 ft. 6 in. total rise, 13 flyers, 4 winders, 1 quarter space and 1 riser, and nosing with 1¼ red deal treads with rounded nosings and hollows mitred and returned; ¾ in. risers mitred to 1½ in. outside, string beaded on the underside, 1½ in. moulded wall string framed carriages and bearers. Curtail steps and ¾ in. beaded fascia and nosing to well, the handrail and balusters to be those from present staircase on 1st floor, re-used as far as they will go, and the deficiency made up with new of the same description.

No. 2 staircases, each 3 ft. 4 in. wide, 7 ft. 4 in. total rise, 9 winders and 1 riser and nosing, 1¼ in. treads, with rounded nosing, 1 in. risers, 1½ in. beaded wall strings, 4 by 4 rounded central newel carriages and bearers."

## ROTHERHAM WATER BILL.

Sir,—Permit me to inform your readers in general and Mr. "Robert White, clerk to the Worksop Local Board of Health," in particular, that I have NOT given any evidence "before the Committee of the House of Commons" relating to the Worksop Waterworks, or to the Worksop Sewerage Works, or to any of the affairs of the Worksop Local Board of Health; of which, indeed, I have no knowledge, and with regard to which I have certainly never "theorized."

Using Mr. White's own phraseology, I beg to "express my regret that a man" of Mr. White's "reputation" should have rushed into print, and made a *personal* attack "without any sufficient data on which to base" his statements; and, "for the credit of the profession, I trust there are few men who would risk their reputation" by making rash and unfounded statements without first communicating with the person intended to be assailed. Mr. White could very easily have addressed himself to me before venturing to propagate a manifestly slanderous imputation.

T. Hawksley.

## WHEN IS A HOUSE COMPLETED?

**In the case of Snell and Others *v.* Finch, tried at the Spring Assizes, Kingston, on the 2nd inst., the chief question raised was, when houses or buildings can be deemed to be completed.**

In November, 1861, one Mead took from the plaintiff Snell a building lease of land, containing two covenants, one to complete the houses, so as to be habitable, by the 29th of September, 1862, and a "substantial fence" by the 23rd of May, 1862. Mead, the lessee, borrowed large sums of money from various persons; among others from Finch, the defendant, on mortgage; and he also made sixteen under-leases, and took mortgages from his sub-lessees. The property in question was a piece of land on which six houses were built. Mead had mortgaged the property in question to Finch, the defendant, and afterwards became bankrupt. Finch, who was assignee of his lease, had possession in March, 1862, but it was contended on his behalf that Snell's attorney had kept him out of possession for some time. Disputes then arose between Finch, the assignee of the lessee, Snell the lessor, and the other parties, mortgagees, as to the accounts and priorities of the securities, &c.; and on the 4th of December, 1862, Finch commenced a suit in equity against him for an account and for certain equitable relief. On the 22nd of December, 1862, Snell, the lessor, commenced this action against him to recover the premises, forfeited under the condition to complete the houses and the fence by the 29th of September, 1862.

There was a great deal of evidence on both sides as to whether the houses had been completed. It turned out in the course of the case that there had not been a continuous fence along and around the whole of the property, according to the covenant. But it was contended that the way in which the houses were built—quite flush with the foot-pavement,—precluded this, and made it impracticable; and that the lessor, having been constantly on the premises and tacitly assented to it, had waived the forfeiture; and in particular a conversation between the builder and the attorney of the lessor—who, it was said, had to a great extent the management of the property,—was relied on as a waiver of the forfeiture so far as regarded the fencing.

The chief conflict of evidence was as to the completion of the houses. On the part of the plaintiff (the lessor), witnesses were called to prove that on the 29th of September, 1862, the houses were not completed, stating that the papering was not done, that the sewers and waterpipes were not "completed," &c. On the part of the defendant, the lessee, the builders and workmen who had been employed on the houses were called to show that they had, in fact, been completed by the 29th of September, 1862, and that any work done after that date was in doing certain work over again, which had, in fact, been done in due time, though it turned out that it was desirable to do it over again. In particular, as to the sewer and waterpipes, it was contended that all that required to be done was to connect them with the main drain or pipes in the streets; and, as regarded the papering, it was admitted that parts of it required to be done again by reason of damp in the plaster work; arising, as was also admitted, from its not having been sufficiently dry before the paper was put on, so that it "sweated."

The Lord Chief Justice, in summing up the case to the jury, said the most important part of the question as to breach of covenant was as to the completion of the houses "so as to be habitable." They had been so completed in October: had they been so completed in September? Men, no doubt, had been at work in the houses after September: part of the papering had to be done over again; and certain other matters likewise were done after that time. The question for the jury was, whether all this had or had not been sufficiently explained. Had the houses been completed in due time—reasonably fit for habitation?

The result was a verdict for the defendant.

## PATENTS CONNECTED WITH BUILDING.*

Machinery for Moulding Bricks, Tiles, Pipes, and Turf. — *E. Schlickeysen*, Berlin. Dated 3rd May, 1862.—This invention cannot be described without reference to the drawings.

Apparatus for Heating or Warming Rooms or Buildings with Steam.—*T. O. Dixon.* Dated 3rd July, 1862.—This invention consists, First, in arranging the steam-pipes, or the pipes for conducting and circulating the steam for heating or warming rooms, in such manner as that the condensed steam or water may be drawn off into a receiving-pipe at various points in the line or circuit, and being conducted thence to a "syphon-box" or steam-trap; steam being also conducted by a separate pipe thereto, from the end of the line or circuit, by which arrangement breakage of joints in the pipes is prevented. Secondly, in the employment of an equilibrium in combination with a float lever in the "syphon-box" or steam trap, by means of which the condensed steam or water is carried off, or is permitted to escape without allowing any steam to pass off.

Improvements in the Manufacture of Pigments or Paints from certain Refuse Materials.—*A. Warner.* Dated June 20th, 1862.—This invention has for its object the application of the refuse or slag obtained from puddling and re-heating or other furnaces used in the manufacture of pigments or paints. For this purpose the patentee takes the refuse or slag above referred to, and reduces the same to a fine powder by any of the well-known mechanical operations for grinding or pulverizing similar materials or other hard substances. The ground or pulver-

* Selected from the lists in the *Engineer*, *Mechanics' Magazine*, &c.

ized materials are then to be washed or otherwise treated, and combined with oil or other materials, and used as pigments or paints for various purposes, as is well understood in the manufacture of pigments or paints from other oxides of iron or other metals. For the purpose of producing the slag or cinder to a fine or impalpable powder, the patentee prefers to use grinding apparatus, such as is used for grinding flints for pottery purposes, the materials being ground in water. After being sufficiently ground, the materials are run off into a tank and allowed to subside, and then the water is run off from the surface, and the wet, slimy mass is spread upon heated flues, or the material may be dried by other means. The pigment or substance thus prepared must then be taken and made up into paint by mixing with water or oil, and may be used in combination with colours and with dryers, according to the purpose for which it is required.

IMPROVEMENTS IN SCREW CLAMPS OR CRAMPS FOR JOINERS AND OTHER WORK.—*H. F. Wells.* Dated April 29, 1862. This invention consists in the use of a notched or plain bar of metal of any desired length, according to the purpose to which the cramp is to be applied, with one or more sliding arms formed in the manner described. When one arm only is used, the end of the bar is turned up to form an abutment or pressing surface, against which one side of the material to be clamped, cramped, or compressed, is placed. The sliding arm is self-fixing by its peculiar form, and when placed in the proper position upon the bar forms the other abutment. An adjusting screw, fitted either in the head of the bar, or in the end of the sliding arm, or in both, completes the cramp. In place of twining one end of the bar up, a plain bar, notched in opposite directions, and two sliding arms, may be added. The sliding arms are formed with a hole or slot at one end, through which the bar can be passed. The arms can thus be moved along the bar to any required position.

A NEW COMPOSITION FOR CASTING TO REPRESENT MARBLE.—*A. Prince.* A communication. Dated April 30, 1862.—The patentee claims the composition formed of minerals and waterglass, or silicate of soda, or potash, or both, substantially in the manner specified, constituting a substitute for gypsum and marble, for the purpose of casting copies of figures, busts, relievos, and articles of sculpture of every kind, &c.

IMPROVEMENTS IN THE MANUFACTURE AND PRODUCTION OF MINIUM, OR RED LEAD.—*J. H. Johnson.* A communication. Dated May 6, 1862.—This consists in the conversion of the oxide of lead, when free or uncombined, and of certain base salts of lead, into minium or red lead, by mixing the same with either carbonate of potash or carbonate of soda, or mixtures of the same, and subjecting such mixtures to the action of an elevated temperature, whereby the oxide of lead is oxidized, and is converted into minium or red lead.

AN IMPROVEMENT IN MACHINERY OR APPARATUS USED IN THE MANUFACTURE OF MALLEABLE IRON AND STEEL.—*E. B. Wilson.* Dated May 5, 1862.—This relates to the vessel in which the molten metal is treated during its conversion into malleable metal or steel, and consists in providing such vessel with a central, or nearly central, exit for the gases, such exit or escape passage dipping at its lower lip into the molten metal, and extending to within a short distance from the bottom of the vessel, at or near the centre thereof. A space is left round the gas exit passage between its exterior sides and the inner sides of the vessel, with the exception of a portion on one side, which is left to form a convenient outlet for emptying the vessel. Provision is also made for hanging the vessel on centres or pivots at each side thereof. The molten metal having been run into the vessel, air is blown therein at one or more separate points of, or entirely round, the top space, which air, after passing under the lip, permeates the molten metal and escapes with the gases up the outlet.

FIRE-PLACES AND STOVES.—A communication. *F. C. Bakewell.* Dated 3rd September, 1862.—The patentee claims, 1st, the use of air passages or recesses in the back wall of the grate extending from below the fire-basket to any desired height above the grating on which the fuel is placed. 2nd, the use of flaps, or other equivalent device, for closing at pleasure the spaces between the grate bars on which the fuel rests, for the purpose of preventing the rapid combustion of the fuel. 3rd, the use of a screw placed over the smoke-flue for the purpose of preventing the fall of soot and dirt into the apartment, and for conducting these substances to suitable receptacles from which they may be removed from time to time. 4th, the combination of the air-flue, the dust-pipe, and screen described, or any of them, with a fire-place or stove, for the purposes set forth.

IMPROVEMENTS APPLICABLE TO THE BURNING OF BRICKS, TILES, &c. — *J. Platt and W. Richardson.* Dated 4th September, 1862.—This invention consists in a method of heating a filled kiln in a preparatory manner; and this the patentees accomplish by transferring thereto the heat from a separate kiln in which the burning of the bricks or other articles has been effected. For this purpose they employ a blast of air which passes from the top of the heated kiln to the lower part of that in which the articles to be burnt are placed.

PREPARATION OF CLAY FOR THE MANUFACTURE OF BRICKS, TILES, &c.—*J. Platt and W. Richardson.* Dated 4th September, 1862.—The apparatus for carrying out this invention cannot be described without reference to the drawings.

MACHINERY FOR CUTTING VENEERS.—*A. B. Childs.* A communication. Dated 12th August, 1862.—The log or block is firmly secured to a bed-plate by means of bolts which pass through the bed-plate and screw into the log or block. The bed-plate is perforated with holes at equal distances apart, and a sufficient number of them to receive a requisite number of bolts to hold the block firmly thereto. The bed-plate may be placed in a vertical, horizontal, or diagonal position, but it is preferred to place it in a vertical position. The bed-plate, together with the block carried thereby, has a motion up and down a distance somewhat over and above the width of the largest block to be cut; and this motion is, by preference, communicated to it by means of two cranks and two connecting rods, one at each end of the bed-plate. The knife, when making the cut, is stationary, but is capable of being moved towards and from the bed-plate by the action of the feed motion, which, by means of a double ratchet, causes it to recede immediately after the cut, and again to move forward immediately before the cut a distance depending on the thickness of the veneer next to be cut. The knife consists of a straight cutting edge, with one side bevelled off; and is firmly secured to a knife-block which is made to slide towards and from the bed-plate. A little before the edge of the knife there is a pressure bar, made adjustible by set screws, and bolted firmly in its required position to a pressure beam. The invention also consists in the method of feeding the knife, and of graduating the feed to the different thicknesses of veneers to be cut.

FOUNDATION OR GROUNDWORK FOR PLASTER FOR CEILINGS, WALLS, PARTITIONS, &C.—*J. Nickson & T. Waddingham, jun.* Dated 1st September, 1862.—This invention consists in the use of plates or slabs of slate, metal, earthenware, or other similar and suitable material, perforated with round, square, or other shaped holes, or with oblong slots, for the purpose of retaining the plaster; a space being left between the adjoining edges of the plates, when placed in position, for the same purpose. The said plates are nailed or otherwise attached to the joists, spars, or battens, and are made of a suitable size to cover the spaces between the same; or they are attached to studs projecting at suitable intervals from the surface of the wall to be covered, so as to leave a space between the wall and the plastering, which is more particularly adapted to the outer walls of buildings, or to walls exposed to damp.

## Books Received.

*A Vacation Tour at the Antipodes; in* 1861-1862. By B. A. HEYWOOD, M.A., Trinity College, Cambridge. London: Longman & Co. 1863.

MR. HEYWOOD, being advised to take a long vacation and a thorough change of air, thought he could not more efficiently carry out the recommendation than by making a trip to the far end of our little planet; and certainly he was much more likely to obtain a thorough "change of air" in Australia and New Zealand than at Brighton or Margate. It constitutes an epoch in the history of the globe, and shows us rather startlingly how rapid are our advances towards a thorough exploration of all its nooks and corners, when we find a voyage to the antipodes selected as a hurried vacation tour for recruitment of health and energy by "change of air."

Mr. Heywood's volume contains a plain, sensible, and popular narrative of what he saw and heard in Australia, Tasmania, and New Zealand; and is valuable as a record of cursory and popular impressions of those thriving colonial countries. His volume is illustrated by views of the Parliament House at Melbourne, the University of Sydney, and other engravings and maps; including a pocket map of Australia and New Zealand, with one of a portion of the Otago gold-fields, near Dunedin, an engraved view of which New Zealand "city" is also given.

*Every Man's Own Lawyer; a Handy Book of the Principles of Law and Equity.* By a Barrister. London: Lockwood & Co. 1863.

"SIX AND EIGHTPENCE saved at every consultation," says the outside of this little volume; and there is no doubt that in many cases money *may* be saved by consulting its pages. This will chiefly be the case, however, when used to learn what may *not* be done; and if all knew what can be done and what cannot, many law-suits and much wasteful expenditure would be avoided. With some omissions (the Building Act, for example, is not referred to) this book contains a condensed account of the great body of English law,—no more of it, indeed, than every Englishman is expected to be acquainted with.

*A Practical Treatise on Calcareous and Hydraulic Limes and Cements, compiled and arranged from the best authorities.* By JAMES G. AUSTIN, Architect. London: Trübner & Co. 1862.

THIS little book, originally published in America, makes no pretensions to originality, and has none; consisting for the most part of extracts from the well-known works of Higgins and Pasley; chiefly from that of the former. They who have not these works will find Mr. Austin's compilation instructive and useful.

*Hints on the Formation of local Museums.* By the Treasurer of the Wimbledon Museum Committee. London: Hardwicke, 1863.

THE Wimbledon Museum has been based upon a village club which has been in successful operation at Wimbledon for some years, on terms which enable artisans, labourers, &c., to benefit by the privileges which the club enjoys. The present little volume cannot but be of considerable use in the promotion and establishment of local museums and clubs; and there is not a village in England which might not have an interesting museum, solely made up of local objects of interest in geological and mineral, botanical and zoological, as well as antiquarian and other departments.

## VARIORUM.

Experimental Essays, by Charles Tomlinson (Virtue, Brothers, & Co., Paternoster-row), treats of the motion of camphor on water; the motion of camphor towards the light; and the modern theory of dew. It is a delightful little book, and is evidently intended to find its way into the hands of young people, by whom most of the experiments may be performed without danger and with great advantage. The author says, truly, "Nature speaks so lovingly to the young, and they respond so willingly, that we may well take advantage of this circumstance to gratify a taste which encourages the order, method, and exactness of science."——The February number of the *Giornale dell' Ingegnere-Architetto ed Agronomo* contains a large outline engraving of the façade of the Church of S. Domenico at Casalmonferrato. Signor Pareto has brought to light an inscription showing the date of the front to be 1506.

## Miscellanea.

ROYAL SOCIETY.—There are 45 candidates from whom the 15 to be elected are to be chosen. Of the 45, 16 are connected with the medical profession.

INSOLUBLE CEMENT.—A Frenchman has, it is said, discovered an insoluble cement in the common snail. At the extremity of the snail's body there is a little white bladder, containing a gelatinous, fat-looking substance. If this be extracted, and the liquid applied to the edges of the broken glass or china, and time given for this natural cement to dry, the parts will hold together so firmly that the mended article is stronger at the united parts than elsewhere. You may break the article, but cannot separate the parts.

BUILDING AT BRECHIN.—Building prospects are in the ascendant here at present, says the *Montrose Review*. The coach-work in Clerk-street, and coach-houses and stables at the top of Bank-street, are progressing towards completion. Mr. John Baxter, has got the contract for the large additions and improvements at Brechin Castle. The plans are by Mr. Bryce, of Edinburgh, architect. The work will soon be commenced. The specifications for the new Farmers' Hall, or City Hall Buildings, are ready for being put into the hands of contractors. There is not likely to be much delay in carrying out this part of the projected improvements in Swan-street.

A SUB-DRAINING RAILWAY PAVEMENT.—Mr. L. Stebbins, of Worcester, Mass., has invented a sub-draining railway pavement, with which he proposes to cover the entire area of streets. It is made of iron; each block about 2 feet square on the surface, and 2½ inches deep. There are four keys or square bolts to each square foot of surface. These keys rise three-eighths of an inch above the surface, and yield to the pressure of the horse's hoof. Each key rests on a rubber spring, which is secured in an iron tube. The inventor claims that it affords the best known surface for wheels to roll on; renders the slipping of horses impossible; and prevents, to a great extent, the accumulation of dirt, reducing the expense of cleaning streets.

PHOTOGRAPHING COPYRIGHT ENGRAVINGS.—In the action, Gambart *v.* Sclater, in the Sheriff's Court, London, Mr. Gambart, the well-known printseller of Pall-mall, sought to recover of the defendant, a shopkeeper at Canterbury, damages for selling photographs of Holman Hunt's "Light of the World," of which he had the copyright. The defendant did not plead, and the only question was the amount of damages to be awarded. Mr. Gambart stated that he gave Mr. Holman Hunt 200 guineas for the privilege of engraving the picture. He paid for the engraving over 300 guineas, and 130*l.* to the owner of the picture for allowing the engraving to be made. With other expenses, the print cost him about 2,000*l.* to bring out. It was the most successful he had ever produced, and for the first year his profits were upwards of 10,000*l.* For the last two years the sale had fallen off, and he found that photographers had copied the print, and he was for his own protection obliged to bring actions. His price was from two to eight guineas, and photographers could produce them for a few shillings: some could be sold for 1½d. The jury assessed the damages at 100*l.*

TREASURE TROVE: DRUIDICAL ANTIQUITIES.—Most people have heard, we dare say, of the recent turning up, in a ploughed field at Mountfield, in Sussex, of a weighty chain and rings of gold, worth 550*l.* as mere metal, being 11 lb. weight; but sold, by the labourer who found it, as old brass, for 6d. a lb., or 5s. 6d. in all, to a knowing blacksmith, who sold it at its full value to London gold-melters, who found it to be Barbary gold, but do not seem to have had any regard for its value as an antiquity. At the inquest held to ascertain the Queen's right to the treasure trove, the labourer thus described his five-and-sixpenny treasure: "I ploughed up a long piece of metal: it was in a hole a little deeper than a foot: it was about a yard long, with two 'trumpets' at each end, twisted in three grooves. We also found a great number of rings, some of which were larger than the others. The larger rings were round, but did not shut to." Two other pieces were afterwards dug up, and were produced before the coroner and jury. During the examination Knight's "Old England" was produced, and several witnesses who had seen the gold agreed in stating that portions of it corresponded with the ornaments round the neck of a Druid, as shown in plate 9; and that the rings, &c., corresponded with a group of British coins in plate 21. The jury decided that the whole of the treasure-trove belonged to the Queen. The coroner, as has often been done by the press, explained that if persons, on finding treasure of this description, gave notice in the proper quarter, it was the practice of the Crown, if the articles found were of much value from their antiquity, to reward the finding the treasure by its money worth, the articles themselves being appropriated to the public use, and placed in the British Museum. Nevertheless, we may add, the public do not seem to be sufficiently informed of this even yet; and it would be well were the press to repeat it prominently on every such occasion as the present. Surely the gold-melters can have no such excuse as that of ignorance, however; and if any one is to be made responsible in the present instance they ought.

THE NEW STREET FROM LONDON BRIDGE TO STAMFORD-STREET.—The contract for the completion of the new street, subway, and sewers from London Bridge to Stamford-street, Blackfriars-bridge-road, has been let to Mr. Pearson, and is now commenced.

THE ROYAL WEDDING PRESENTS.—We understand that the exhibition of the wedding presents of the Prince and Princess of Wales will be opened to the public on Thursday, the 16th of April, in the Italian Sculpture Court of the South Kensington Museum. There will be a private view on Wednesday evening. The free and students' days will be kept as usual.

TESTIMONIAL.—The carpenters in the employ of Mr. R. Freeman, contractor for the extensive works now going on in Ely Cathedral, met, on the occasion of the removal of the present clerk of the works, Mr. R. H. Norris, at the Lamb Hotel, and presented him, according to the *Cambridge Chronicle*, with a handsome gold pin, with a diamond set in star, for the kind advice and able superintendence over the workmen during a residence of twelve months. The testimonial was presented by Mr. Bailey with some suitable remarks, appropriately replied to by Mr. Norris.

COATING IRON TO PREVENT OXIDATION.—A proposition has been laid before the Admiralty by Mr. Walenn, a London chemist, to coat iron of any size, from a ship's bottom itself, as one whole, to a single bolt for the armour-plate,—extent of material or shape being no objection,—with a deposit of metal, such as brass or any other alloy, as thin or as thick in substance as may be wished, with a bright, hard, enamelled surface. This would prevent the oxidation of ships' armour and bolts, and the fouling of iron ships' bottoms. Mr. Walenn has been directed to proceed to Portsmouth Dockyard to inspect the existing arrangements of baths and batteries now adopted there, and to send in to the Admiralty a special report, with accompanying estimates of his proposed plan of electrotyping.

SANITARY STATE OF LEEDS.—The first case has just come before the Leeds magistrates in which the board of guardians have taken legal proceedings in conformity with the recent decision to co-operate with the town-council in carrying out the Nuisances and Diseases Prevention Act. Their complaint was that the owner of property in Poland-street, Leeds, permitted the existence of a drain containing foul and offensive matter prejudicial to health, and also suffered a privy to remain in a filthy state. Poland-street is a *cul de sac*. Smallpox, resulting in death, has taken place in the street, and a woman had died in the immediate neighbourhood that morning. The defendant had been served with a notice, and the other owners of property there had been willing to remove the offensive drain, but they could not get the defendant to assist. The defendant also had lately made himself liable to severe penalties by letting a house to a tenant who suffered twelve or fourteen persons to live together in one small room, and no less than three deaths occurred from that overcrowding. The magistrates ordered the privy to be cleaned out within twenty-four hours, and the nuisance from the drain to be remedied in seven days.

THE CAWNPORE MEMORIAL.—The consecration of the monument erected over the well at Cawnpore, into which were cast the remains of those massacred there on the 15th of July, 1857, took place on the 11th of February last. Not one of the thousands of natives who crowded to witness the scene was admitted within the enclosure. Lord Elgin stood on the steps of the platform erected round the well. The monument consists of an octagonal Gothic screen, designed by Colonel Yule when Public Works Secretary, on a platform which encircles the well. The well itself within is vaulted over, and covered with a pedestal, which awaits the statue Lord Canning promised to order from Baron Marochetti. Round the rim of the well, and within the screen, is written—"Sacred to the perpetual memory of a great company of Christian people, chiefly women and children, who, near this spot, were cruelly massacred by the followers of the rebel Nana Dhoondopunt, of Bithoor; and cast,—the dying with the dead,—into the well below, on the 15th day of July, 1857." The Bishop, his chaplain, the Archdeacon, the chaplain of Cawnpore, and others, followed by the Viceroy and all the Christians present, went in procession round the grounds, chanting the service of consecration. Mr. Thornhill, commissioner of Allahabad, whose brother's bones lay below, was the architect, who superintended the raising of the monument and the laying out of the grounds.

THE ROYAL ACADEMY.—The statement which has been extensively circulated, to the effect that the Academicians had given up the right hitherto possessed by them of each hanging eight pictures, and that the number is now reduced to four, is incorrect. Some such arrangement, we are informed, has been come to with reference to portrait painters who are members of the Academy, but not to the general body, yet.

COPPER.—In manufactured, says the *Cornish Telegraph*, nothing under fixed rates can be obtained, demand moderate. For raw there is rather more inquiry, some of the smelters still refusing orders at market prices. Foreign copper is quiet, quotations being comparatively in excess of English: buyers are not attracted to any extent. Burra Burra, 94*l.* 10s. to 95*l.*; Kapunda, 95*l.*; Spanish, 87*l.* to 88*l.*; Chili, 83*l.*

PROPOSED GUILD OF ART-WORKMEN, AT HANLEY, STAFFORDSHIRE.—A numerous meeting of art-workmen has been held at the Mechanics' Institution, Hanley, at which Mr. Henry Sherwin, of Wolstanton, presided. Stoke and Burslem were represented as well as Hanley. The circular calling the meeting stated the object to be the establisment of a guild or association of art-workmen and others for mutual aid in promoting a knowledge of the principles of art in their application to pottery. It was resolved unanimously to establish such a society: it will meet fortnightly.

THE TORONTO MECHANICS' INSTITUTE.—The secretary of the Toronto Mechanics' Institute writes a letter in the *Hants Independent*, stating that the institution has cost 10,000*l.*; that it has a library of 6,000 volumes, and a reading-room supplied with 100 newspapers and periodicals; and that the members number 1,000. Many of them attend classes for instruction in book-keeping, penmanship, English grammar and composition, mathematics, architectural and mechanical drawing, music, French, and ornamental drawing. The writer concludes by saying:—"Canada is a great country, and a good home for the industrious. I am sure that the starving thousands in England might make here a comfortable living."

A LARGE VAT.—There has lately been finished, at the vinegar works of Messrs. Hill, Evans, & Co., in Worcester, a monster vat, which stands on a 2-feet dwarf wall of nine bricks in thickness: its height is 23 feet: it is 102 feet in circumference, 23 feet in diameter, and in its construction 325 staves of Dantzic deal, each 3 inches thick, have been used. The staves are bound by twenty-three hoops of Staffordshire iron, 3½ inches wide and three-eighths of an inch in thickness, and the vat will hold 114,643 gallons, or 3,184½ barrels. The largest known vat next to this is said to be at the porter brewery of Messrs. Guinness, at Dublin, which holds about 80,000 gallons, so that the Worcester vat exceeds it by upwards of 35,000 gallons. The total weight of this mammoth, when full, is 570 tons. If circular tables were placed inside it while empty, 100 persons might conveniently dine round them, and a tolerably numerous school might assemble to tea within its walls. Standing near to it are two other vats, holding upwards of 80,000 gallons each; and there are others of 70,000, 50,000, and so on down to 1,700, and making altogether 76. These monster vats have been built by Mr. James Oxley, of Frome, Somerset.

ROYAL GENERAL THEATRICAL FUND.—The eighteenth anniversary festival of this institution was celebrated on Saturday evening last at the Freemasons' Tavern, Great Queen-street, under the presidency of Mr. Charles Dickens. More than 200 persons sat down to dinner in the great hall. A numerous party of ladies honoured the entertainment with their presence, and were accommodated with seats at the top of the hall, and also in the gallery. Mr. Buckstone, in his address, made allusion to the usual position of ladies in such entertainments:—"Gentlemen," he said, "seeing the ladies still seated by themselves, and cruelly parted from our sides, I must tell you it is yet an undecided point whether in future they shall not sit down and dine with us. But as I have promised to be chairman next Ash-Wednesday, at another Dramatic Fund Dinner, where ladies do sit down, I shall have an opportunity of observing how the system works; and if I find it very comfortable, as I am certain I shall, I intend to recommend the directors of our fund to do the same thing; and then you can bring your wives and sweethearts; and, by your liberal donations, prove to them what noble and generous hearts you have to bestow upon them." The subscriptions announced by Mr. Cullenford, the secretary, amounted to nearly 400*l.*; her Majesty's donation being 100*l.*

MONUMENTAL.—Mr. Thomas Earle has just completed a colossal seated statue of the Queen for the People's Park, Hull; and another colossal statue (the figure in this case standing) of the late Prince Consort, to be placed before the Licensed Victuallers' Asylum, of which his Royal Highness was patron.——A fund is now being raised towards erecting a monument in Canterbury Cathedral to the memory of Archbishop Sumner.

DIAMAGNETISM AS A RESUSCITATIVE.—A contemporary says,—"Mr. Faraday has discovered that suffocated persons may be revived by passing a form of magnetism, known by his name, into what surgeons will understand as the phrenic nerve. The French physiologists have tried it on scores of cats and dogs suffocated, and call it, in compliment to England, the 'Faradisatian' plan."

NEW CHURCHYARDS.—A return has been compiled which shows that, in the last thirty years, new ground has been consecrated in 2,688 parishes of England and Wales to serve as churchyards. In 1,412 parishes, very nearly half the whole number, the ground was presented as a free gift, and in 229 it was purchased by voluntary subscription. Like most of the occasional returns made to Parliament, this is by no means complete or correct. No information has been received from the dioceses of Exeter and Lincoln, and a difference of opinion seems to have prevailed in reference to including cemeteries not belonging to any particular church.

"STEAM SUPERSEDED:" GUNPOWDER AS A SUBSTITUTE.—An invention has been provisionally specified by Mr. John Macintosh, of North Bank, Regent's Park. It consists in the rapid generation of power by the aid of oxygenous "fuel" in tubes, or inside the usual boiler, and composed either of coke or coal, and nitrate of potash, with, in some cases, sulphur and chloride of potash; and, if desired, the "fuel" is put into form with adhesive substances, such as mineral or vegetable pitch, resin, paraffine, gutta-percha, caoutchouc, or glue. The prepared fuel is put into closed tubes or furnaces, with valves for the escape of the gaseous products of the combustion, which may be used alone or in combination with steam, air, or other fluids, in giving motion to machinery. This oxygenous "fuel" may be put into ordinary steam-boilers; and when ignited, it instantly produces power to give motion to engines, or it may be used for other purposes where power is required as an auxiliary. How will it act on the metal of the tubes and boilers?

EUROPEAN VANDALS IN EGYPT.—Writing from Egypt, Mr. A. H. Rhind says:—M. Mariette complains, and justly, that the Vandalism of European travellers is as rampant as ever. The evidence of this is to be seen on all sides in the chippings and scratches and chiselled names which deface the monuments everywhere. I may mention, however, three special instances from among those related to me by M. Mariette, as having occurred since he entered upon his office, and they will illustrate what has been done by some visitors of the three nations from which come the greater number of travellers in this country. Let the first be an Englishman. He went up the Nile with a brush and a pot of coal-tar and wrote himself down all over the monuments in letters a foot long. [Cannot Mr. Rhind send us his name?] Take another case of two Americans. An attempt had been made by M. Mariette to secure the future safety of the celebrated Royal Tomb known as Belzoni's, which, notwithstanding the scientific mutilations of Dr. Lepsius and other accidents, is still a splendid relic. A door was made for it and a keeper appointed. But one morning these American travellers appeared at the spot, and not finding the keeper there, as he had not been warned, they beat down the door, burned part of it to boil their coffee, and thrashed the keeper when he arrived. At Edfoo, two Frenchmen showed similar or more aggravated contempt for the efforts at conservation. After the very perfect temple there was cleared out, a keeper was likewise appointed for it; and when he, on the French visitors beginning to possess themselves of a fragment, remonstrated with them, stating his orders on the subject, they simply abused him and his superiors, and proceeded to chip off and pocket the pieces they coveted. It might produce some effect if, in your own and other influential journals, it were prominently stated, that the Egyptian monuments are cared for; that foreigners are now practically their only defacers; and that it is as foolish and unjustifiable to break off fragments or cut names on them, as it would be to attempt to do the same in the Pantheon at Rome or in Westminster Abbey.

ARCHITECTURE AND SCIENCE.—Cardinal Wiseman, in his lecture "On Points of Contact between Science and Art," illustrated his argument by a matter relating to architecture which occurred in the history of St. Peter's at Rome. "Although," said the cardinal, "the architect, Michelangelo, had taken the greatest precaution for the security of the dome, yet in 1681 numerous cracks appeared in various directions through the cupola. Marble dovetails placed across the crack broke with alarming rapidity, and it was feared that in a few years the whole dome might fall in. Various remedies were suggested by architects; but the Pope Benedict the Fourteenth wisely observed that this was not the business of art, but that of science. A commission of three eminent mathematicians (Boscovich, Le Sueur, and Jacquier) was appointed to examine the case. In 1742 they issued their report, showing by their calculations, that the weight of the entire dome with its lantern came to 55,248 tons, and that there was a balance of 1,674 tons on the side of pressure against support; concluding with the remark, 'that irreparable ruin must be apprehended unless a timely and efficient remedy was applied.' The remedy they proposed was entirely scientific—to put six more solid iron girders round the huge periphery of 420 feet. No time was lost. In 1743 two girders were braced round the drum, and in 1744 three more were added. We have here a notable instance of Science coming to the rescue of Art in one of its most painful crises. The proposed cure fully answered; and now, after 120 years, no sign has been given of subsequent damage." Architecture, we must take the liberty of reminding the learned cardinal, is a science as well as an art, and its professors, to be entitled to be so called, must be themselves competent to construct edifices that will not fall, and to prescribe efficient remedies for those that seem disposed to do so. We do not look very patiently on the attempts which are being made in more quarters than one to represent the architect simply as the designer of pretty forms.

## TENDERS.

For a warehouse, John-street, Crutched-friars, for Mr. W. T. Mackrell. Mr. John Whichcord, architect:—

| | |
|---|---|
| Kirk | £3,349 0 0 |
| Brown & Robinson | 3,186 0 0 |
| Macey | 3,078 0 0 |
| Ashby | 3,037 0 0 |
| Simms | 2,890 0 0 |
| Sharpington & Cole | 2,877 0 0 |
| Piper & Wheeler | 2,830 0 0 |

For two dwelling-houses, to be built on the Lees, Folkestone, for Mr. R. Offord, London. Mr. Joseph Gardner, architect. Quantities supplied:—

| | |
|---|---|
| Petts | £2,721 10 0 |
| Dunk | 2,680 0 0 |
| Andrews | 2,617 0 0 |
| Stiff | 2,548 0 0 |
| Pope | 2,520 12 0 |
| Ayers & Son | 2,499 0 0 |
| Hoad | 2,499 0 0 |

For construction of four waste weirs, on River Weaver navigation, Cheshire. Mr. E. Williams, jun., engineer:—

| | |
|---|---|
| Nowell | £3,034 3 5 |
| Dewitt | 2,494 6 0 |
| Harley & Dean | 2,445 13 0 |
| Pilling | 2,284 0 0 |
| Dixon & Sleight | 2,253 0 0 |
| Dean | 2,238 0 0 |
| Oliver | 1,895 0 0 |

For bailiff's cottage and farm buildings, on Early Wood Farm, Sunninghill, Berks, for the General Land Drainage and Improvement Company:—

| | |
|---|---|
| Jenkins | £2,066 10 0 |
| Bartlett | 1,695 0 0 |
| Rollings | 1,598 10 0 |
| Hall | 1,475 7 3 |
| Smith | 1,351 0 0 |
| Barnes | 1,336 10 0 |

For additions to the Melton Mowbray Union Workhouse. Mr. R. W. Johnson, architect:—

| | |
|---|---|
| Porter | £392 0 0 |
| Morrison & Tinkler | 353 4 9 |
| Clifton | 348 0 0 |
| Masson | 339 19 6 |
| Hall | 335 0 0 |
| Chapman & Son | 331 0 0 |
| Hayes | 325 8 0 |
| Barnes & Weaver | 319 8 0 |
| Fast | 310 0 0 |
| Booth | 288 15 6 |

For an addition to Evershed & Sons' candle factory, Eastern-road, Brighton. Mr. A. Anscombe, architect. Quantities not supplied:—

| | |
|---|---|
| Cheesman | £960 0 0 |
| Lynn | 948 0 0 |
| T. Anscombe | 920 0 0 |
| Winder | 920 0 0 |
| Fabian | 877 0 0 |
| Patching | 850 0 0 |

For general repairs to the old vicarage, Battersea:—

| | |
|---|---|
| Easton | £303 15 0 |
| Thornton | 273 10 0 |
| Strong | 266 0 0 |
| Bass | 185 0 0 |
| Eastman | 129 10 0 |

Accepted for a new manse, Greenock. Messrs. W. & J. Hay, architects. The quantities were not supplied:—

| | |
|---|---|
| Steele (mason) | £569 0 0 |
| Lang & Aitkin (joiners) | 351 0 0 |
| Burns (slater) | 32 7 6 |
| Foster (plasterer) | 57 0 0 |
| Brownlie, Buchanan & Co., (plumbers) | 68 0 0 |
| Barbour & Johnston (painters) | 25 0 0 |
| Chalmers (bellhanger) | 6 9 0 |
| | £1,108 16 6 |
| Marbles and grates, say | 50 0 0 |
| | £1,158 16 6 |

For works to be done at Park-road Villas, Twickenham, for Mr. Robinson:—

| | |
|---|---|
| Long | £599 0 0 |
| Scott | 544 0 0 |
| Goodwin | 519 0 0 |
| Kinnimmont | 404 0 0 |

For building new offices in Austin-friars, upon site of old warehouses. Mr. R. L. Roumieu, architect. Quantities by Messrs. Welch & Atkinson:—

| | |
|---|---|
| Mansfield & Son | £1,900 0 0 |
| Mashman | 1,797 0 0 |
| I'Anson | 1,780 0 0 |
| Dove, Brothers | 1,755 0 0 |
| Browne & Robinson | 1,734 0 0 |
| Hill & Son | 1,694 0 0 |
| Burton | 1,653 0 0 |

For general repairs to, and new buildings in rear of, No. 35, Finsbury-square, for the City of London Truss Society. Mr. Herbert Williams, architect. Quantities supplied by Mr. James Dudley:—

| | |
|---|---|
| Axeford & Co. | £2,062 0 0 |
| Patman & Fotheringham | 1,949 0 0 |
| Partridge & Crutch | 1,737 0 0 |
| Chessum | 1,723 0 0 |
| Adamson & Son | 1,717 0 0 |

For making and draining Quarry-road Blacklands, Hastings, for Mr. C. H. Frewen. Mr. H. Carpenter, architect:—

| | |
|---|---|
| Palmer | £760 0 0 |
| Bridgeland | 639 0 0 |
| Smith | 628 0 0 |
| White | 613 0 0 |
| Kenwood | 589 0 0 |
| Harman | 466 10 0 |
| Bull | 419 10 0 |
| Howell | 402 13 0 |
| Ades | 384 11 0 |
| Ashton | 329 0 0 |

For additions to villa, Hastings, for Mr. John Phillips. Mr. H. Carpenter, architect:—

| | |
|---|---|
| Jones | £327 0 0 |
| Kenwood | 315 0 0 |
| Vidler | 312 0 0 |
| Grisbrook | 307 0 0 |
| Harman | 305 0 0 |
| Howell | 290 0 0 |

For the erection of a public-house, and dwelling-house adjoining, in Church-street, Hackney, for Mr. A. Manners. Mr. C. Humphreys, architect:—

| | |
|---|---|
| Piper & Wheeler | £2,169 0 0 |
| King & Sons | 2,169 0 0 |
| Ashby & Sons | 2,164 0 0 |
| Ennor | 1,977 0 0 |

For repairs to the Orphan Working School, Haverstock-Hill. Mr. James Harrison, architect:—

| | Inside. | Outside. | Total. |
|---|---|---|---|
| | £. s. d. | £. s. d. | £. s. d. |
| Cox & Cutler | 52 12 6 | 44 10 0 | 97 2 6 |
| Bates | 30 0 0 | 65 0 0 | 95 0 0 |
| Thurlow | 42 15 0 | 45 10 0 | 88 5 0 |

The "*Art Journal*" of November, in its description of Benson's Great Clock, says: "It has attracted universal attention; its construction has, we believe, obtained general and strong approval; it is one of the largest chiming clocks as yet manufactured in this country." Benson's new showrooms contain clocks designed by the first artists of the day, and include clocks for the drawing-room, dining-room, bedroom, library, hall, staircase, bracket, carriage, church, turret, railways, warehouse, counting-house, with musical, astronomical, and every description of clock, from the plainest to the highest quality of which the art is at present capable. Church and turret clocks specially estimated for. Benson's illustrated pamphlet on clocks and watches (free by post for two stamps), contains a short history of clock and watch-making, with descriptions and prices; it acts as a guide in the purchase of a clock or watch, and enables those who live in Scotland, Ireland, Wales, the Colonies, India, or any part of the world to select a clock. J. W. Benson received a Prize Medal and honourable mention. 33 and 34, Ludgate Hill. Established 1749.—[Advt.]

## TO CORRESPONDENTS.

E. H.—H. de M. (asylum is already built).—W. A.—J. F.—F. & G. R.—J. H.—J. D.—H. B.—A. & R. D.—M. A. G.—X. Y. Z. (time enough, when published).—H. P. (ction of a Drying Closet is given in one of our volumes).—A. W. T. (was in type).—Cheap Churches and Chapels (next week).

We are compelled to decline pointing out books, and giving addresses.

All statements of facts, lists of tenders, &c., must be accompanied by the name and address of the sender; not necessarily for publication.